Florida WILDLIFE

National Wildlife Week
Habitat Improvement

Fishing · Hunting
· Conservation ·
Outdoor Recreation

MARCH 1969

The Florida Magazine for all Sportsmen

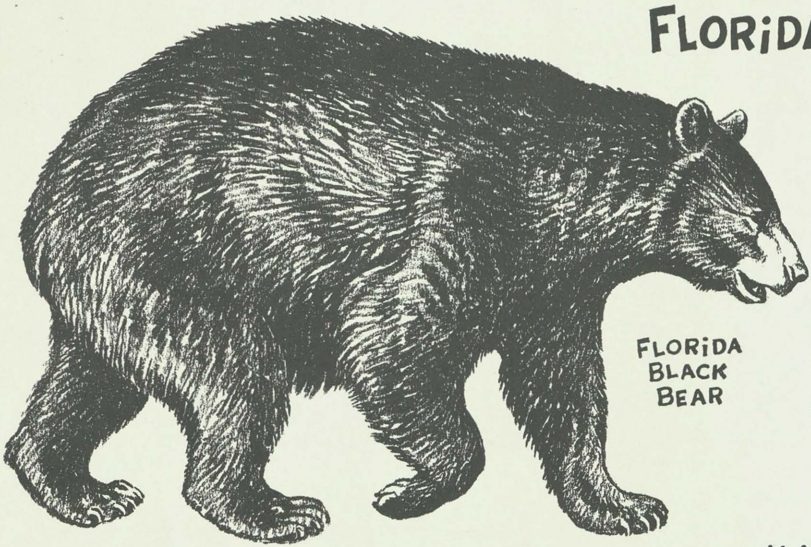
25 CENTS

FLORIDA STATE LIBRARY

Florida Wildlife Scrapbook

FLORIDA BLACK BEAR

— AND ITS NORTH AMERICAN COUSINS

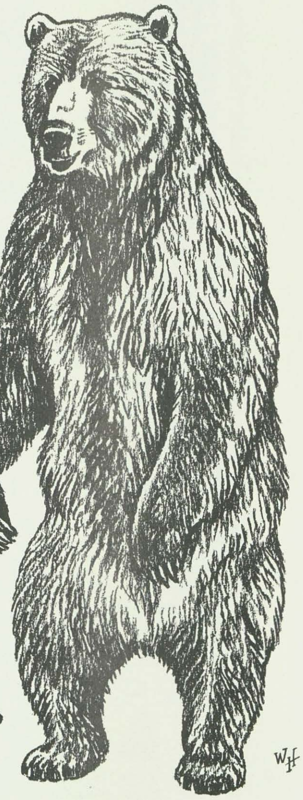


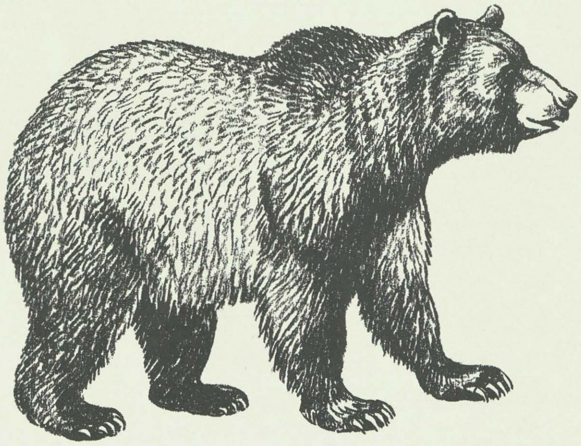
FLORIDA BLACK BEAR

THE LARGEST LAND ANIMAL IN FLORIDA • HEIGHT TO 6 FEET • WEIGHT TO 400 POUNDS OR MORE • FOUND THRUOUT THE STATE LIVING IN SWAMPS, FORESTS AND PORTIONS OF THE EVERGLADES

ALASKA BROWN BEAR

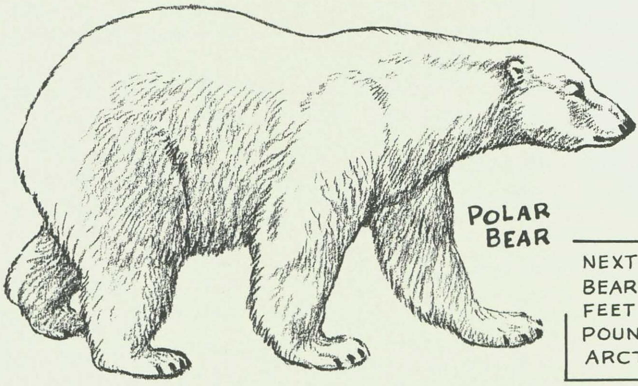
THE LARGEST CARNIVOROUS (MEAT EATING) ANIMAL ON EARTH • UP TO 9 FEET TALL STANDING • WEIGHT TO 1500 POUNDS • INHABITS THE ISLANDS AND MAINLAND OF ALASKA





GRIZZLY BEAR

REVERED BY THE INDIANS • RESPECTED BY ALL MEN • VARIES IN COLOR AND SIZE • TO ABOUT 7 FEET TALL AND WEIGHT TO 900 POUNDS OR MORE • INHABITS THE MOUNTAINS OF NORTHERN MEXICO, THE WESTERN U.S., CANADA AND ALASKA



POLAR BEAR

NEXT TO THE ALASKA BROWN BEAR IN SIZE • UP TO 7½ FEET TALL • WEIGHT TO 1100 POUNDS • INHABITS THE ARCTIC REGIONS OF AMERICA

FLORIDA WILDLIFE MAGAZINE • FLORIDA GAME AND FRESH WATER FISH COMMISSION

Florida
WILDLIFE

VOL. 22, NO. 10

MARCH 1969

official publication of the
Game & Fresh Water Fish Commission
State of Florida

★

Publications Department
BILL HANSEN *Editor*
WALLACE HUGHES *Art Director*
GENE SMITH *Editorial Assistant*
C. L. SATTERFIELD *Circulation*

In This Issue

Asleep In The Deep: Maybe .... Ross Phares 11
Habitat Improvement .... Werner O. Nagel 17
Gator Coming Out Party .... Mike Fogarty 22
Bird Man of Lake Okeechobee .... Carol Stem 24
Who Owns The Game?—Part 3 .... Ernest Swift 27

Departments

Fishing 7
Meet Your Commission 10
Fish Management Notes 29
Hunting 31
Conservation Scene 34

The Cover

A non-migratory member of the waterfowl family, the Florida Duck is closely related to the Northern Greenhead Mallard. The drake is shown at top, the hen below. They are also known as summer duck, summer mallard and black duck. See pages 6 and 30.

From A Painting By Wallace Hughes

FLORIDA WILDLIFE is published monthly by the Florida Game and Fresh Water Fish Commission, Tallahassee, Fla. Single copy price, 25¢. Subscription rates: 1-year, $2.50; 2-year, $4.75; 3-year, $6.25. Change of address should be reported promptly. The Commission assumes no responsibility for unsolicited manuscripts and illustrative materials. Permission is granted to reprint text materials, EXCEPT for advertising and commercial purposes, provided full credit is given FLORIDA WILDLIFE, and contributors. Clearance must be made with photographers and artists to reproduce illustrations. Entered as Second Class Matter Nov. 8, 1947, at the U.S. Post Office, Tallahassee, Fla., under the Act of August 24, 1912.

Copyright 1969 by
Florida Game and Fresh Water Fish Commission
Tallahassee, Florida 32304

ROSE TALLAHASSEE

COMMISSION

DR. R. H. SCHULZ, Chairman
Marianna

W. B. COPELAND
Jacksonville

W. T. McBroom
Miami

WILLIAM M. BLAKE
Tampa

JAMES B. WINDHAM
Jacksonville

★

ADMINISTRATION

DR. O. E. FRYE, JR., Director

H. E. WALLACE
Assistant Director

JOEL McKINNON
Administrative Assistant

JOHN W. WOODS, Chief
Fisheries Division

JAMES A. POWELL, Chief
Game Management Division

BRANTLEY GOODSON, Chief
Law Enforcement Division

JAMES T. FLOYD, Chief
Information-Education Division

★

RHETT McMILLIAN, Chief
Communications Division
Federal Communications Bldg.
New Smyrna Beach, Florida

★

REGIONAL OFFICES

Northwest Region
T. L. GARRISON, Manager
226 Airport Drive
Panama City, Florida 32402

Northeast Region
ROBERT BRANTLY, Manager
P.O. Box 908
Lake City, Florida 32055

Central Region
J. W. BICKERSTAFF, Manager
1239 S.W. 10th Street
Ocala, Florida 32670

Southern Region
J. O. BROWN, Manager
2202 Lakeland Hills Blvd.
Lakeland, Florida 33801

Everglades Region
LOUIS F. GAINEY, Manager
551 North Military Trail
West Palm Beach, Florida 33406

Adult nutria weigh 15 to 25 pounds. They will burrow into dikes and levees, if available; also build floating houses—actually platforms. They are similar to the native muskrat and beaver, except that the nutria's tail is long, round, sparsely haired.

the fur that failed

first brought into this country as an experimental fur bearer, the nutria, or coypu, has taught many states a costly lesson

"RETIREMENT IS EASY WITH NUTRIA," read the heavy black type at the top of the 1957 Florida newspaper advertisement. "Nutria are easily cared for in outdoor pens, are hardy and prolific in all climates," it continued. "Only small space required —*excellent market for pelts*—will make your retirement years happy and profitable . . ."

Shades of P. T. Barnum! It was a fur farming get-rich-quick scheme, a "confidence game"—and was so labeled by the National Better Business Bureau, Incorporated.

The big nutria "boom" was promoted by *breeders,* not fur houses. The fast money was in live stock, not skins. There never was a good domestic market for ranch nutria pelts—and only low demand for the better grade wild-trapped variety. Nearly all that was marketed was shipped to European processors.

Although pairs of live nutria were sold to the gullible for as much as $1200 per, and downward to around $300 for a pair, the top price for a few prime pelts only reached about $5.00 each—paid by speculators. Most nutria brought only from 50¢ to $1.75 per skin!

Claims made by nutria breeders' advertising that ranch nutria had a waiting market paying $30 to $75 per skin were groundless.

Like most con games, this one, too, quickly played out. But these artists had been dealing with wild animals, not phony home improvements or shoddy mail order merchandise. The next events were predictable enough.

Disillusioned nutria owners in Florida and other states began liberating unwanted animals into local lakes and river marshes—most foolishly. Other nutria had been escaping flimsy pens over the years. Worse yet, at least one Florida municipality and some well-meaning but ill-advised sportsmen clubs purchased nutria and released them deliberately in attempts at aquatic vegetation control in their lakes and ponds. They, too, were sold a bill of goods. Their nutria soon vanished into habitat of their own choosing.

The Game and Fresh Water Fish Commission, realizing the dangerous potential of nutria, urged state regulation of their introduction. Florida Statute 372.98 was passed in 1959 licensing nutria farms, prohibiting release, imposing secure housing requirements, and terming the animals "a public nuisance."

Florida can consider itself lucky these 25-pound South American rodents didn't take over wetlands here as they did in Texas and Louisiana, where they laid waste not only the coastal marshes but farmers' sugar cane and rice fields as well. Being entirely herbivorous, the nutria cut aquatic plants like mowing machines, destroying valuable waterfowl food and habitat by hundreds of acres and ravaging crops when those gave out. They also damaged dikes around the rice fields by their incessant burrowing. And they all but eliminated the native muskrat population, their North American cousins, who, though smaller, were far more valuable to the fur trapper.

Only concerted nutria control, by trapping and organized shooting, finally turned the Louisiana-Texas nutria situation back toward normalcy. But they still have a huge annual nutria crop, a destructive liability which may yet be controlled and conserved and turned into a profitable asset.

A market for nutria flesh, largely for use as ranch mink food, has moved 10,000,000 pounds annually since the 1962–63 season from Louisiana alone, according to LOUISIANA CONSERVATIONIST, their wildlife magazine. Also, the state is hoping to revive their once great wild fur industry, which would involve not only nutria but the muskrat, which is definitely making a comeback.

The nutria *must* be harvested, say biologists, if more marsh and crop destruction is to be avoided. (Nutria produce 5 to 8 young per litter, 2 and 3 litters per year—any time of year.)

For the record, Louisiana's 13 original nutria were brought to Avery Island, Iberia Parish, in 1937. Some escaped overcrowded pens at the experimental fur farm in 1939, to be joined by "over 300" more when a storm wrecked the facilities in 1940. The ranching experiment was then abandoned but the nutria was on its way. It spread eastward and westward with considerable speed, gnawing its way to notoriety, its spread being assisted by subsequent hurricanes and flood tides.

Florida has some nutria in the wild, too, but, thankfully, after nearly 20 years there still are no signs of a nutria problem. Apparently some natural control force is holding them in check—habitat type, climate, natural enemies, etc.

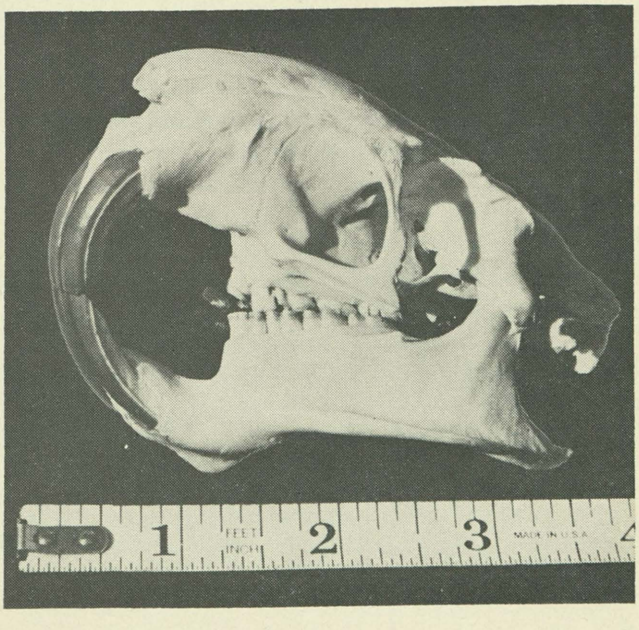
Reports of nutria have come from Choctawhatchee Bay (Walton and Okaloosa counties), where the first nutria in Florida marshes turned up around 1950 and where the largest colony is found today; from Pablo Creek (Duval), Guano River (St. Johns), Orange Lake (Alachua), and from a Lake County marsh; from Crescent Lake (Putnam), the Indian River (Brevard and Indian River), from the Sneads Smokehouse area at the head of the Aucilla River (Jefferson), where a fair sized colony is reported, and from the mouth of that river (Jefferson and Taylor); from the lower Apalachicola River (Franklin and Gulf), the Intracoastal Waterway and brackish water bays of Okaloosa County, the Escambia Bay area (Escambia and Santa Rosa), and from other isolated areas.

The evidence is that Florida's scattered nutria originated from escaped or released ranch stock, though it is possible some of those in northwest Florida walked and swam from Louisiana and the Alabama delta marshes.

Nutria, sometimes called coypu—from the Latin name, *Myocastor coypus*—are *un*protected fur bearers in Florida. If you should see a 25-pound water rat, do the state a favor and eliminate it the same as you would a mouse in your closet. It is a known "undesirable alien" possessing great destructive potential. ●

Illustrations By Wallace Hughes

By GENE SMITH



You cannot miss the big yellowish-orange front teeth of the nutria. The aquatic rodent, imported from South America, cuts plants at waterline. This nutria skull was collected in Lake County in 1964, which, incidentally, was the last year any of the nutria fur farm licenses (three) were issued in Florida.

The Cracker Mallard

By **E. DALE CRIDER**
Game Management Biologist

THROUGHOUT MOST of peninsular Florida, from a line east and west through Gainesville southward to Cape Sable in Monroe County, the most common duck during the summer is the *mallard.*

If you hesitate to accept this identification and wish to pursue a more satisfying name for this native, semi-tropical webfoot, don't take my word for it. To settle any questions on this topic seek the advice of a "Cracker" hunter and he'll put you straight: that the *mallard* is the only nesting duck in Florida, with one exception, that being the Wood Duck (*Aix sponsa*), which nests in hollow trees throughout the state.

If you persist with your questioning, your Cracker friend will more than likely prove his point by taking you to some small marsh or roadside borrow pit and pointing out a mated pair of ducks which will resemble the Black Duck (*Anas rubripes*), which nests up in New England and eastern Canada. But you'll not be looking at Black Ducks, my friend, for the southernmost breeding Blacks are found in North Carolina. Although the ducks before you will not resemble the mallards you're familiar with from up North, they'll be mallards just the same—"Cracker mallards."

Again, if this designation annoys you just question your informer a bit further by asking him to identify the big ducks which nest in the northern prairies, the ones you've always referred to as the Common Mallard. You will learn it is the majestic "Northern Greenhead"—the duck so scarce in Florida nowadays a Cracker duck hunter would walk a mile just to see one.

You should not assume that the "Cracker mallard" is a newcomer. Back in 1874 the Florida Duck, as it is more technically known, was officially described by an ornithologist named Ridgway, who designated it as a non-migratory nesting duck found only in Florida. But he distinguished it merely as a subspecies of the Black Duck. Then in 1923 the Florida Duck was elevated to the status of a separate species (*Anas fulvigula*). But due to its coloration being so similar to the Black Duck, and since the hen and drake are colored alike in both species, the Florida Duck and the Black Duck have remained close relatives in the minds of most waterfowl biologists and other duck enthusiasts.

The "mallard" handle—presumably derived from the Florida Duck's resemblance to the female Northern Greenhead Mallard (*Anas platyrhynchos*)—has long annoyed "purists," those who go strictly by the identification books. Only recently have the true relatives of the Florida Duck been disclosed. Today the Florida Duck has been reclassified and again lowered to only a race category. But this time, as a result of years of cross-breeding experiments, biologists renamed the Florida Duck a subspecies, or race, of the Northern Greenhead Mallard—not of the Black Duck.

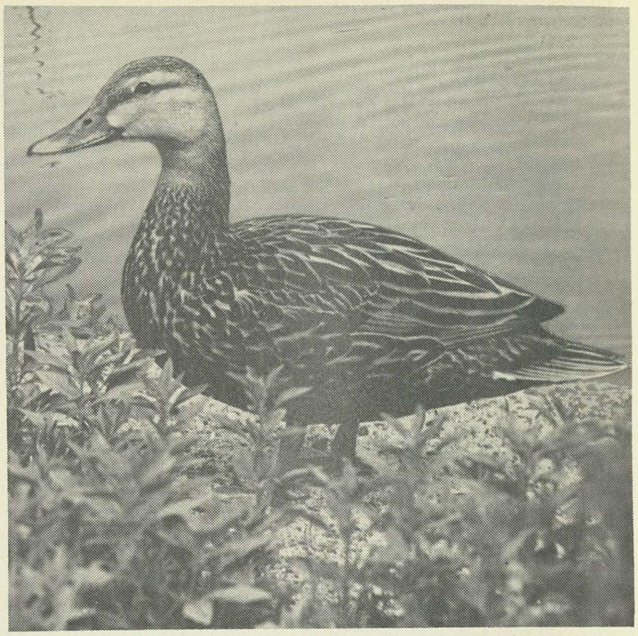


Photo By Wallace Hughes

The Florida Duck is a relative of the migratory Greenhead Mallard; most popular—and most researched—of all North American waterfowl. Presumably, mallard biology plus the management literature applies to this native Florida Duck.

This is admittedly of more significance to waterfowl managers than to the average sportsman and bird lover. Current trends in waterfowl conservation are toward *individual species management,* as is reflected in liberal bag limits and seasons on certain species and additional restrictions on scarce ones.

Back when ducks were plentiful and northern nesting grounds were adequate, there were fewer hunters for which to provide a harvestable resource. A duck was a duck then, regardless of its color, creed or race. Now each waterfowl species is usually managed, to some degree, as a separate unit.

Ironically, less is known about the Florida Duck than most North American ducks—due to its restricted range and insignificance in terms of population. Only recently has the surface been scratched regarding its life history and population perimeters. However, with the wealth of management information available to Commission biologists on its extremely popular green-headed brother from the North, much can be applied for more properly managing our "Cracker Quacker." ●

FISHING

Angling Lures

there are varieties of tandem-hooked fishing lures—streamer flies, plastic worms and porkrinds—that will take Florida panfish and largemouth bass

By CHARLES WATERMAN

RIGHT AT THE MOMENT I can't think of any modern, free-spooling reels for plug casting that have handles on the left side and I have never wanted one.

A fine and experienced fisherman who visited me the other day said such a reel would be a great convenience to him since that would make it unnecessary for him to change hands with each cast. He's right handed and says he sees no reason why a plugging reel can't work like a spinning outfit—cast with one hand, crank with the other. He says that anyone who can operate a spinning reel with the handle on the left could operate a plugging reel with the handle on that side.

It's something to think about and there may be others who feel the same way.

"Couldn't you work a plug better with your right hand?" he asked. He had me there and it was one of those conversations when I thought of what I shoulda' said roughly six hours too late. Once during that six hours I took a plug rod out and tried to work it with my right hand. I hope he reads this. I now have my answer.

The answer is: No, I can work the outfit better with my left.

Now I anticipate his comeback. He'll say: "That's just because you never did it any other way and you're used to grabbing it in your left hand after every cast."

And he has me again because I have no suitable answer. I do have some arguments on the hand-changing side though.

Both this fisherman and I are right handed. With a spinning rod we cast with our right hands and crank with the left. Evidently he likes it that way and I'm not too sold on it. With a spinning rod my right hand gets very tired because I never let go, holding the grip just the same through casts and retrieves until I sometimes fear rigor mortis is setting in. For me a changeover is a rest.

Now with the entire fishing tackle industry on tenterhooks over my conclusions I have another goody to hand out.

One expert fisherman I know is a left hander and he complains because all of the free-spool reels have the handles on the right side. He says his hand gets extremely tired because he never gets a chance to relax his hold on his plugging rod. Even though he's left handed he'd like to have the handles on the left.

And another thing. For years I always used fly reels with the handle on the left side so I'd never have to let go of the rod with my right. Then it occurred to me that it would be restful to change hands when reeling in and I went to right handed reels and have stuck with them right up to my dotage.

This, of course, gives me the last word. The tackle manufacturers can sigh in relief, and since the fellow who brought up the subject does not write a fishing column, and since I refuse to give him equal space, the subject is closed.

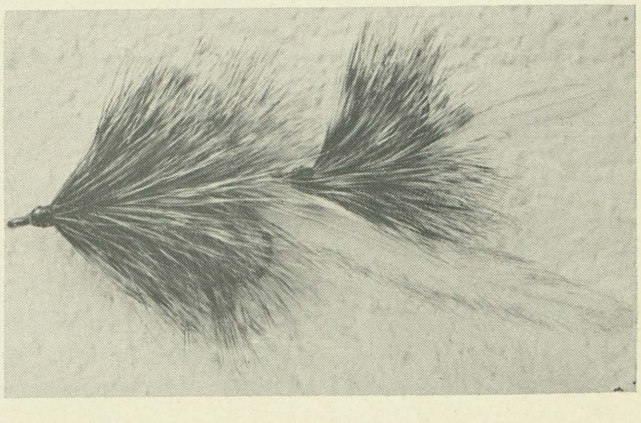
Or does he have something?

A TANDEM-HOOKED lure is nothing new. There are tandem-hooked porkrinds, plastic worms and streamer flies and have been for many years.

Buck Pryor, a fly fisherman from Jonesboro, Arkansas, recently sent me some samples of tandem flies that work well on bass and panfish and have some hooking qualities that bear discussion.

Actually, each unit is really two streamer flies, the larger one in front and connected to the smaller by a piece of heavy monofilament. Except for size the two flies are alike but the larger hook of the lead fly turns the opposite way from the trailer fly hook as they are coupled together. Being connected

(*Continued on next page*)



A tandem fly employing two separate streamer bodies of different size. The hook that is in the trailing streamer is considerably smaller than forward one.

(Continued from preceding page)

by mono, they have a chance for extra movement when brought through the water fast. They could be used with or without spinners.

Tandem flies of this sort can frequently hook bluegills and other sunfish that nibble at the trailing end of streamers and often don't get caught. Bigger fish will generally take in the whole works and get hooked anyway except on days when striking short by accident or design; then the second hook could help. The tandem fly is 2½ inches overall.

Two lures in one are designed for a variety of reasons. One that causes discussion is a plug and tiny lure combination which depicts a small fish with its mouth open, and grabbing for another lure that's a few inches from its nose and all fastened together on a leader. Some who have used such baits swear the fish attacks the small lure trying to get it away from the "plug" and others say the striking fish grabs the plug or tries to gulp the whole works in one attack. Anyway, fish are caught by such rigs.

This method is related to the combination of a noisy plug and a trailered lure that may be as much as three feet behind it. Here the theory is that the fish comes over to look at the big plug and then takes the smaller, trailing lure. The same thing happens with a popping cork used for salt water trout. Hearing the cork popping on top and figuring his friends are striking bait up there the fish comes over to join the picnic and grabs bait suspended beneath the cork.

And in many kinds of trolling a small lure or bait is preceded by a train of attractors that may be several feet long. Often the attractors are larger than the fish they're expected to appeal to.

A NEW LINE of "Classic" spinning reels introduced by South Bend brings up some important points about conventional, open faced models.

Their No. 935 seems to be a well-built, medium-sized number with special attention to materials which will stand up against salt water and what seems to be a durable bail.

The builders explain that their anti-reverse operates directly on the drive shaft to eliminate gear stress and they're outspoken about their durable line roller.

But something about reel sizes: South Bend presents the ultralight, then the combination fresh water and salt water size (the 935) and finally a big salt water model.

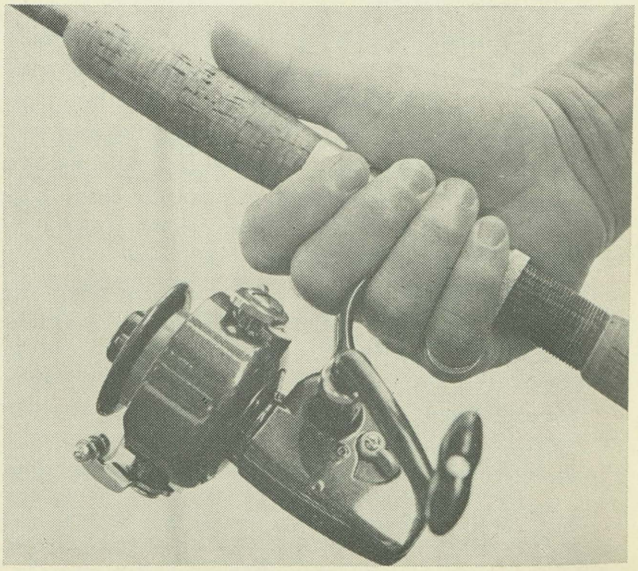
This medium sized 935 will take 265 yards of 10-pound monofilament and is as near to the all-around size as you can get. Nearly all spinning could be done with a reel of those dimensions. It could get by on panfish and work in the surf in an emergency.

A spool of that size is big enough to give some added distance if your first guide will accommodate the big loops and the handle and mechanism are husky enough for pretty brutal heavy fish horsing (which may not be for spinning gear anyway). Anyone hunting for an all purpose number might look twice.

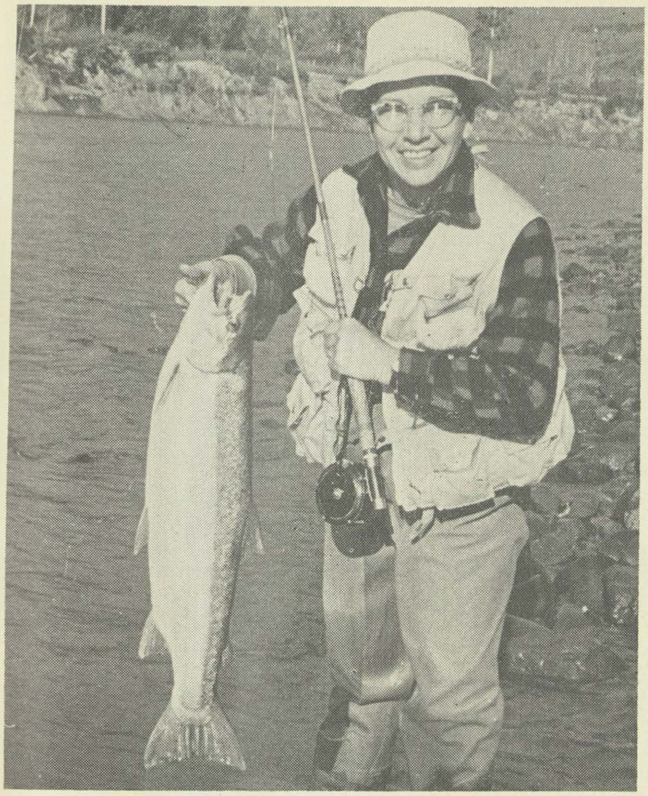
FOR THE SECOND time in three years I have had a go at fly fishing for steelhead on the Kispiox River in British Columbia. The Kispiox neighborhood traditionally produces more prizewinning steelhead (listed as "Western Rainbow" in the FIELD & STREAM contest) than any other part of the country.

Last September in five days of fishing I had exactly one steelhead strike on the Kispiox, but it was quite a strike as I landed a 26½ pounder which would have been enough to win the FIELD & STREAM contest the year before. For some time I basked in the glory of having the Number One fish of 1968 but it was a season of big steelhead and I was soon shoved back into my rightful status of steelhead amateur.

The real point of bringing up the steelhead story (besides showing what a hotshot fisherman I am) is to point to the fact that steelhead which return from the sea to their rivers of birth for spawning, breed true to size to a great extent. That is, a river such as the Kispiox may consistently have the biggest steelhead in the world year after year, even though the stream may be rather small as steelhead rivers go. In fact, some of the very large neighboring rivers have runs of small steelhead.



This all-purpose "medium" size spinning reel is one of the new South Bend models which are built to take salt water in stride.



Big enough to create a sensation on many rivers, this steelhead is a little one on Kispiox River, British Columbia, and biologists say it's a member of a "big strain of fish." Could the same thing be true of the largemouth bass? The Florida largemouth is an extra large subspecies, but there are big and small strains.

Among steelhead fishermen, who are a very dedicated lot, the sizes of fish to be expected in various streams is pretty much common knowledge, and fish biologists recognize that certain strains of fish are larger than others. Study of steelhead is still in its infancy because of the immense complexity of a life cycle which includes going to sea and then returning to a river of birth.

Anyhow, non-scientific fishermen are likely to wonder just how much there is to "strains" of the various species. Granted that habitat is the biggest factor in fish propagation, is it possible that some of the big bass areas of Florida got that way because they happened to have big strains of fish? And could these big fish be spread to other areas where the largemouths tend to be small?

As an open comment to biologists, I hope they won't throw cold water on this thought by citing a bunch of disproving tests along those lines. I like to think of families of *BIG* bass and would rather not hear any more about it.

LAUNCHING A BOAT in the surf takes a little thought and often a bit of athletic skill. I have read numerous articles about it but am chicken myself.

Every time I get all steamed up about going to sea in a small boat from a sandy beach I begin to consider the complexities of having an outboard motor and all my gear dunked in salt water and I figure some other way of getting out there.

Briefly, the system consists of using a boat which two healthy men can handle, generally made of aluminum and employing an outboard motor of from 9½ to about 25 horsepower. A smaller engine won't have the shove to keep the adventurers out of trouble and a bigger one will be too heavy for manhandling.

On a nice, calm day these fishermen wait until they spot a series of small waves, whereupon they head the bow into a little swell and push the boat into the drink fast. One of them jumps in and grabs the oars and while he pulls like the devil his buddy pushes until the water gets deep for wading and then jumps in and starts the motor. They then get away from shore fast to avoid breakers which could roll them back on the beach, probably upside down.

In returning they pick a big swell, ride the backside of it until it drops from under leaving them high and dry on the sand and then hop out and drag their boat out of the way of the next wave.

Of course this operation is staged only on calm waters and when you're out fishing you must keep an eye on the seas and know when to get back to shore. It's a matter of experience and judgment.

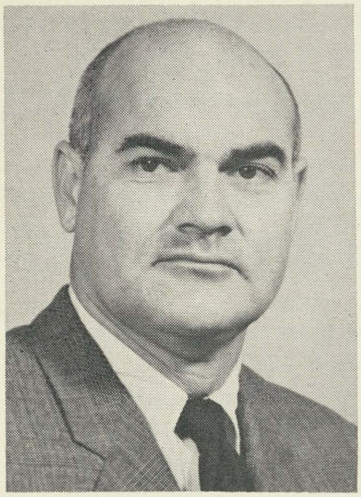
One pair I know does this thing with a 12-foot pram, but a vee bow is supposed to be better as it helps get through the first wave or two with less resistance. The smaller the boat I'm in the further the shore always appears, and I am apt to whistle *Home Sweet Home* softly any time the beach disappears when I'm in a boat under 18 feet in length.

But as nearly as I can learn the most dangerous part of smallboating the Florida coast is running the inlets, and even an old time skipper occasionally meets disaster doing that. The two surf launchers I spoke of claim to be mortally afraid of attempting an inlet, even in a boat much larger than their 12-footer.

Some of the finest fishing of all is available to the small boater who can get his light tackle out of sight of land, but only the very wise and the very foolish seem to get in on it.

ON THAT BUSINESS about barbless hooks. You can buy them from Herter's, Inc., R.R. 1, Waseca, Minn. 56093. There aren't many of them in use any more and it took David R. Brewer of Lantana to stir me up a while back when I said they didn't appear to be for sale any longer.

If you want to try them for small lures, flies or with bait I think you'll find it's especially easy to hook fish deeply with them. The little hump doesn't interfere much with penetration but, of course, you need to keep a tight line once the fish is hooked. I've never seen barbless trebles. ●



Meet Your Commission

James B. Windham
Commissioner
Jacksonville

THE NEWEST MEMBER of the Florida Game and Fresh Water Fish Commission is James B. Windham, 36, Jacksonville insurance executive and sportsman, who was appointed to a 5-year term on January 23, 1969 by Governor Claude R. Kirk, Jr.

Commissioner Windham, who served on the Governor's staff as a $1-a-year Special Assistant during the early days of the administration, is a native South Carolinian who has made his home in Jacksonville since 1960.

He was born in Lynchburg, S. C., where he attended public schools. He is a graduate of Newberry College at Newberry, S. C., having received his degree in Education and Business. While at Newberry he served as president of the student body and was elected to membership in the Blue Key National Honor Fraternity. He was also listed in Who's Who in American Colleges and Universities.

Windham entered the insurance business in Sumter, S. C. but accepted a position with The Independent Life and Accident Insurance Company in the home office at Jacksonville, Florida, in May 1960.

The following year he was selected to attend a course at the Life Insurance Marketing Institute, Purdue University, after which he was appointed head of the company's Proposal and Tax Service. He also has completed special tax courses at the University of Florida and a management course at Princeton University.

In 1962 his company gave him additional responsibilities which include recruiting and employment of personnel, general supervision, sales, and promotion.

Commissioner Windham, who is unmarried, is a 5-year veteran of the U. S. Air Force. He served in Korea and the Far East. He is active in the civic and social affairs of Jacksonville. He serves on the board of directors of the Legal Aid Society, is a member of Willing Hands, Inc., serves on the Youth Council on Civic Affairs, and is a past vice president of the Jacksonville Junior Chamber of Commerce.

He holds membership in the ATO Fraternity, the Sales Marketing Executive Club, the Friars, the Downtown Council, and is on the Military Affairs Committee of the Florida State Chamber of Commerce.

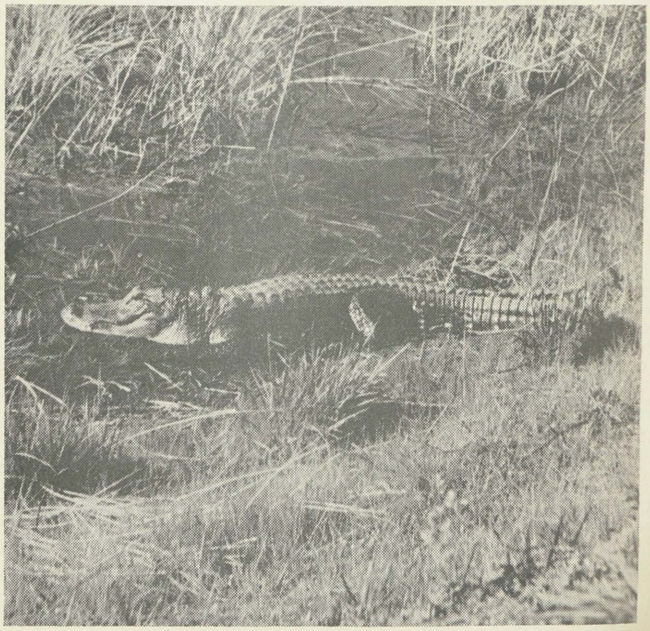
He also is a member of the Navy League, the Life Underwriters Association, Ye Mystic Revellers, the Florida Yacht Club, and the Ponce de Leon Country Club. Windham is a Scottish Rite Mason and a Shriner.

Not only does Commissioner Windham bring proven business and management ability to the Commission. He is a lifelong outdoorsman and is well read in the intricacies of wildlife and fisheries conservation. He enjoys hunting, fishing, camping and golf and expresses a particular fondness for quail hunting and bass fishing.

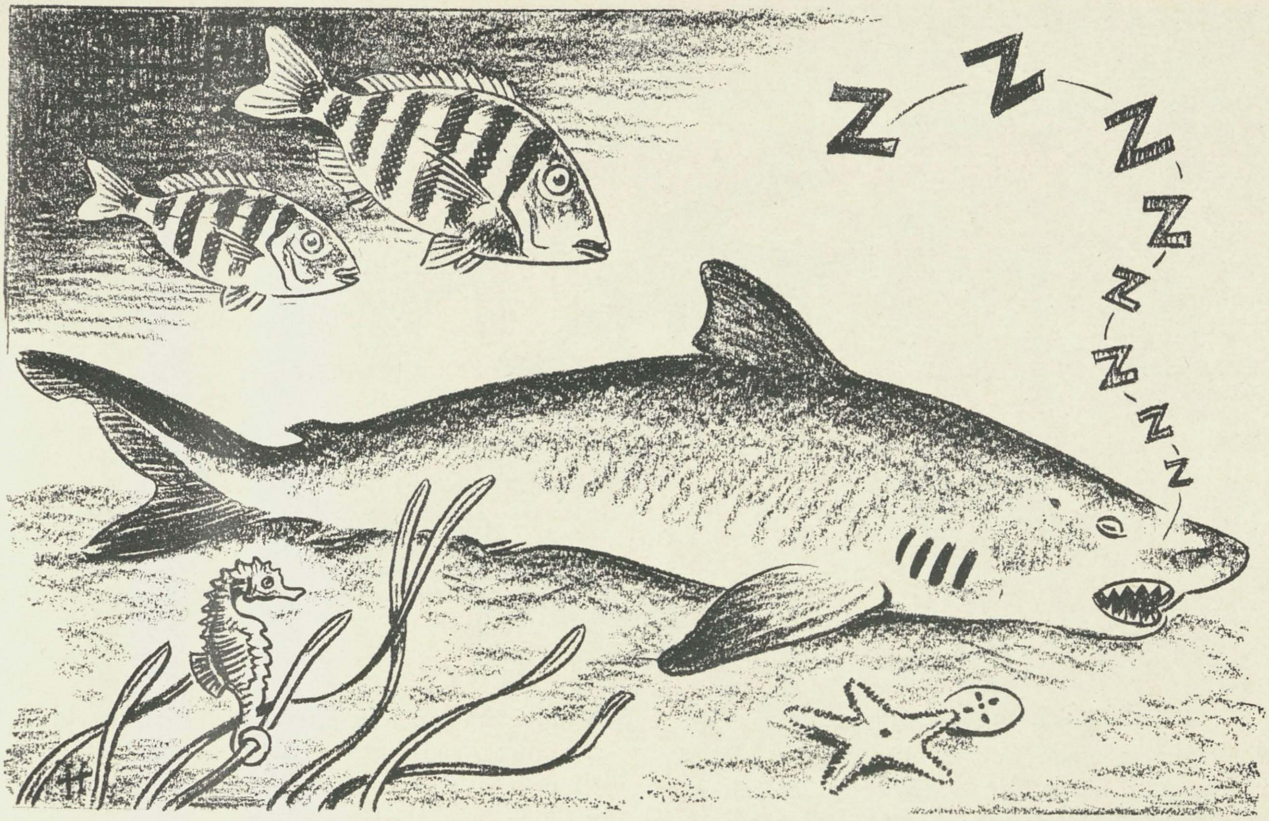
Windham, who resides at 4255 Yacht Club Road, Jacksonville, has expressed a desire to serve the state not only in the proper management and wise use of today's wildlife resources. He is convinced it is time to preserve wilderness habitat for Florida's future needs.

He says, "It behooves us *now* to protect wildlife and fisheries resources and wilderness habitat because if we don't, future generations won't be able to see, much less enjoy, game and fish in natural surroundings." ●

Photo By Bill Hansen



Prime alligator habitat in Florida is shrinking every day. Too, its slowness to mature is an inherent disadvantage. Even man's interference in natural water fluctuation works against gators. Unless we preserve more natural wetlands, gators and other wildlife forms are in unparallel trouble.



Sharks—do they or don't they sleep? Other fish do!

some members of wildlife may find it difficult to locate good sleeping sites

Asleep in the Deep: Maybe

By ROSS PHARES

ANIMALS ARE HAVING sleeping problems because of narrowing living space and the bedlam of modern civilization.

It is generally thought that animals can sleep any time under almost any conditions. Nothing could be further from the truth. They are not as adaptable as people. Nature has required no standard sleeping hours in general for her creatures. But virtually every species has its own clock set for sleeping hours and its bed, manner of repose, fixed for it. And by this clock and in this bed it must get its rest.

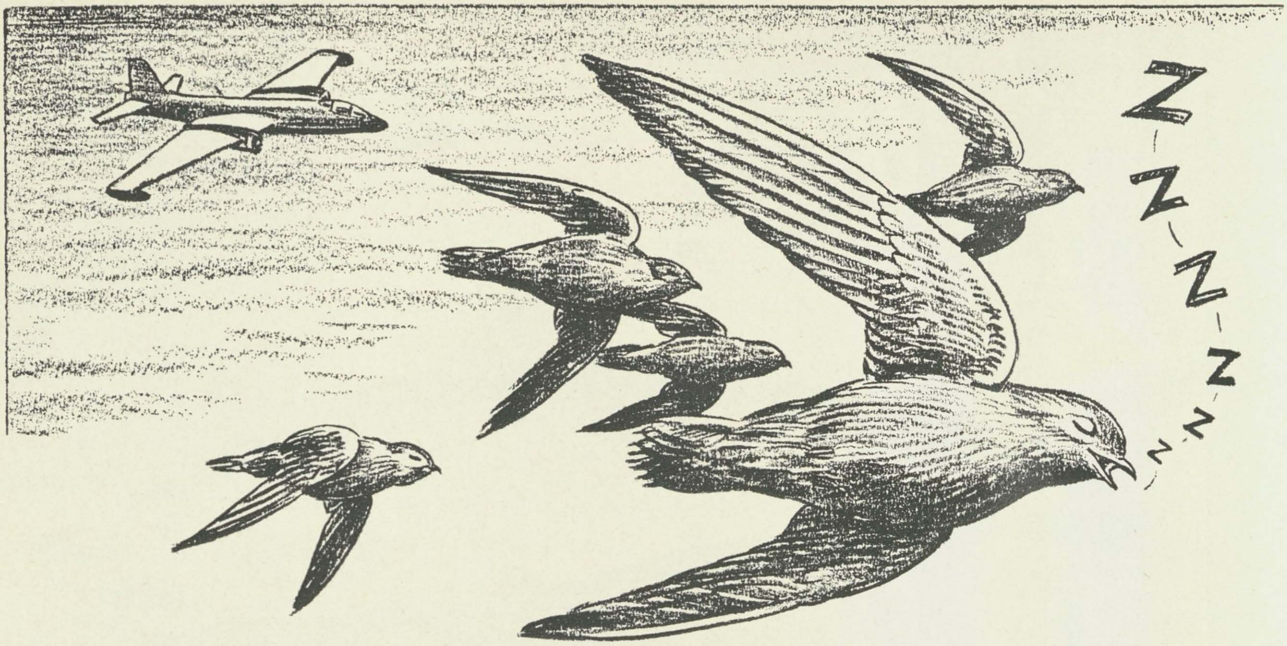
A mere refuge may not be enough for a transferred or migrated animal. Without sleeping accommodations an animal that is accustomed to it may not thrive. Animals sleep in unbelievable postures and conditions. But it's their required way.

If bats and certain species of birds can't find a place to hang upside down they are out of luck for the night. Most animals prefer as soft a bed as they can arrange, but a goat will fret the night out if his bed is soft. He will leave straw or sand for a stump, a pile of posts, or a rock. A number of water creatures have no concern for the yielding qualities of their bed. But the depth of the water must be just right for several mammals, such as the hippopotamus, who insist on sleeping under water with only their nostrils showing.

Many animals will not get their required rest unless they have private sleeping quarters. A gorilla, for instance, sleeps stretched out with his arms crossed behind his head. But many other animals couldn't sleep alone and like it. Togetherness seems necessary to them for repose. So they must have a "king-size" bed—or else. Pigeons have been seen roosting on top of each other in layers that stacked up a yard high. Some species of swifts bed down for the night clinging to each other in the manner of bees swarming. And certain snakes sleep in balls tangled together like spaghetti in a bowl.

Animals must have adequate undisturbed time to sleep. Amount of sleep required at one time varies among the species from seconds to a whole season. And the overall lifetime ratios of sleep to wakefulness ranges from almost nothing to most of the creature's life.

(*Continued on next page*)



(*Continued from preceding page*)

Many people claim that a shark never sleeps, and thus puts himself in a class by himself by being the only animal that can live without sleep. It is understandable that no one probably has ever slipped up on a shark asleep in his natural habitat. But apparently nature requires that all her creatures must sleep, at least a little.

Some people claim that fish, as a class, never sleep. This conclusion has been reached because no one has ever seen a fish with its eyes closed—for the simple reason they have no eyelids. But they do become inactive, apparently relaxing into unconsciousness, and thus sleep. However, scientists know little about the rest requirements of fish.

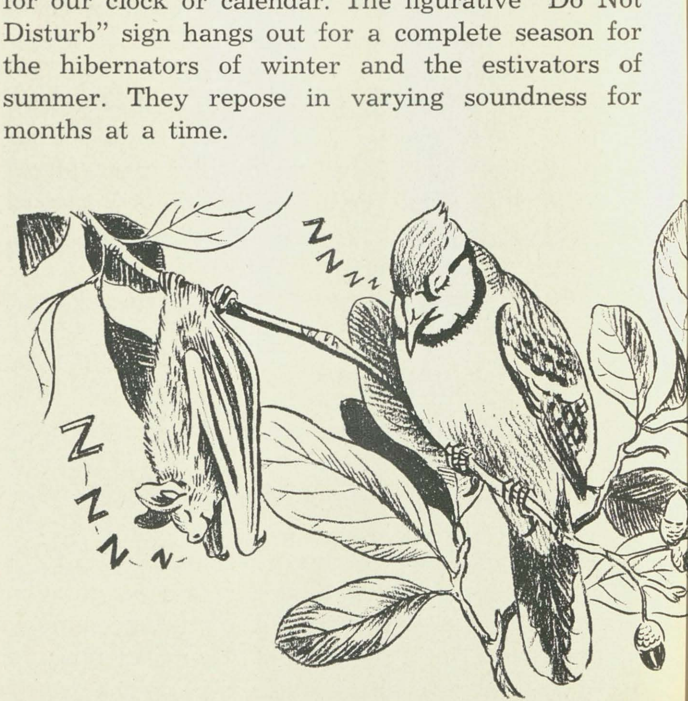
A similar generalization convinced people for a long time that whales do not sleep. This deduction was reached because they have been seen following ships for days on end. But recent observed habits of the California gray whales indicate that they do sleep, but can go for incredibly long periods—up to several months—without it. They seemingly do not sleep during their four-months migration of 6000 miles from the Arctic Ocean to Lower California. So many have been found stranded in the shallow lagoons there it has led to the theory that the whales are so tired and far behind on their sleep they sleep so soundly they do not sense the tide receding, and thus wake up stranded. It seems likely that whales sleep, or at least doze, while traveling: Birds repose on the wing, seals seem to sleep while in motion, and it's believed some people drive cars while asleep.

It has long been reported that seals in water sleep at intervals of one and a half to five minutes because of surfacing requirements for breathing. However, studies of the brown seal in an aquarium indicate that, at least under some circumstances, a seal may sleep while in motion, and just because it surfaces does not necessarily mean it wakes up to do it.

Many animals get by on very short intervals of repose. But they must have these intervals for well-being. Rabbits take 16 to 21 regularly spaced naps a day. White rats take 10 rest periods every 24 hours. Elephants get their sleep in naps of two to three hours, and require about half as much as people.

On the other hand, a few animals literally sleep their lives away. Some snakes, for instance, may sleep right through day and night with only a single brief awakening.

When it comes to sleep animals have no regard for our clock or calendar. The figurative "Do Not Disturb" sign hangs out for a complete season for the hibernators of winter and the estivators of summer. They repose in varying soundness for months at a time.



Swifts, left, can sleep in a hard-to-believe place. Pilots have reported seeing them apparently snoozing on the wing two miles high! Bats, below, sleep comfortably only when they are hanging upside down. Songbirds and other wildlife—along with people—often have sleep disturbed by man-made noises. Sleep requirements of birds and animals vary considerably. Some are real sleepyheads; others take many short siestas. Bears, right, sleep all winter in cold climates while rabbits take up to 20-odd short naps a day. Successful zoo-keepers respect these diverse sleeping and nap habits.

Drawings By Wallace Hughes

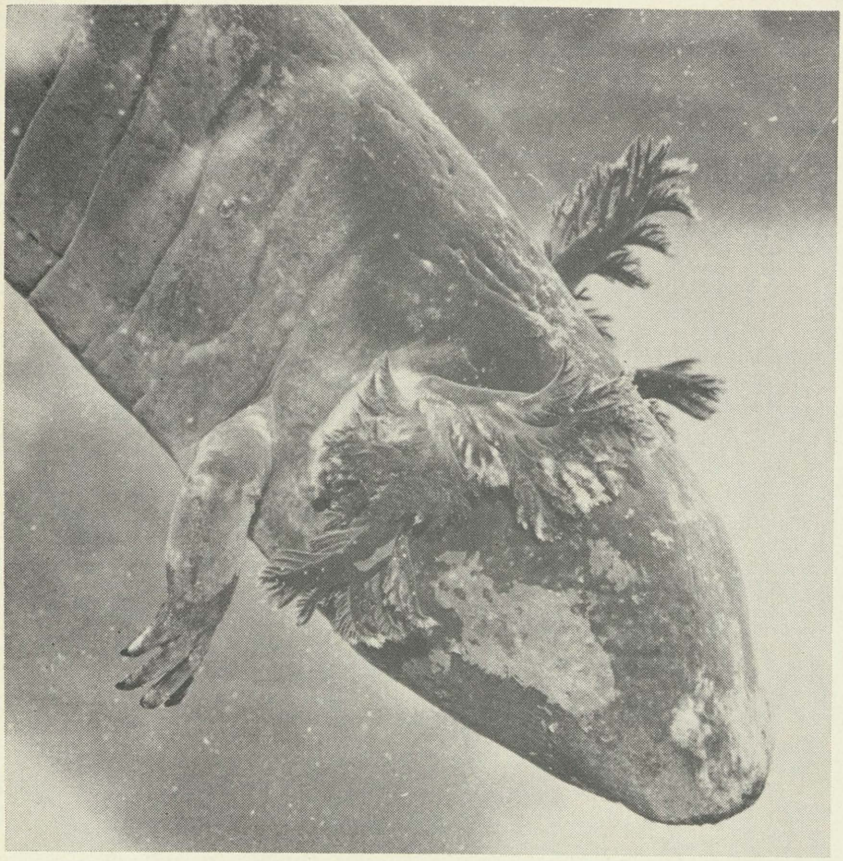
Anyone who thinks animals can get by on any kind of rest arrangement that may appear adequate from a human viewpoint should have a talk with an experienced zoo keeper. Their observations reveal that you can't reverse or safely tamper with nature's schedules. It may be as easy to change spots and stripes as sleeping requirements. The Munich Zoo, when it had probably the finest collection of primates in the world, took pains to respect the privacy and sleeping hours the jungle had established. Blinds were hung outside the sleeping boxes of the apes and monkeys to assure them of relative privacy, quiet, and darkness for the full twelve hours sleep accustomed to in the jungle.

Just how much the wild creatures are being put out by our noisy muscling in on their territories is difficult to determine. Ducks and geese, for example, in their long migrations need rest stations and sleeping accommodations. There probably are as many ponds and lakes as ever for overnight stops. But can a bird feel safe and secure enough to close both eyes? People are crowding in closer and closer to the banks. Lights from industry glare. Boat traffic may keep the "bed" rocking most of the night. Also, the sounds of the deep woods have changed. Instead of the soft natural night sounds of the woodland creatures diesel and jet engines pound and scream, and people collect and rend the countryside with electronic noises of ingenious varieties and intensities. One wonders how much electric guitar even a goose can endure.

We have little reliable information on the capacities or determination of wild creatures to adjust to encroaching civilization in their free state. But observations of swifts in recent times gives us something to think about. Flocks as high as two miles above the earth seemingly asleep on the wing have been found by airplane pilots. More and more jet pilots report running into these birds asleep on the wing. Some appeared so sound asleep they dived under the airplane at the very last moment.

It seems there is no way left for some creatures to escape civilization for a sound, uninterrupted night's sleep. You would think that any that could go up two miles above the earth and sleep on the wing could do it. But the swifts must be thinking otherwise by now.

Who knows how much wildlife has left their old, overcrowded haunts to try to find a place to get a good night's undisturbed sleep, found it and stayed there—or wore out in the search. Doubtless more people in this country have broken down in health and efficiency because of inadequate sleep than inadequate food and housing. For all we know the animals may be started on the same unfortunate route. ●

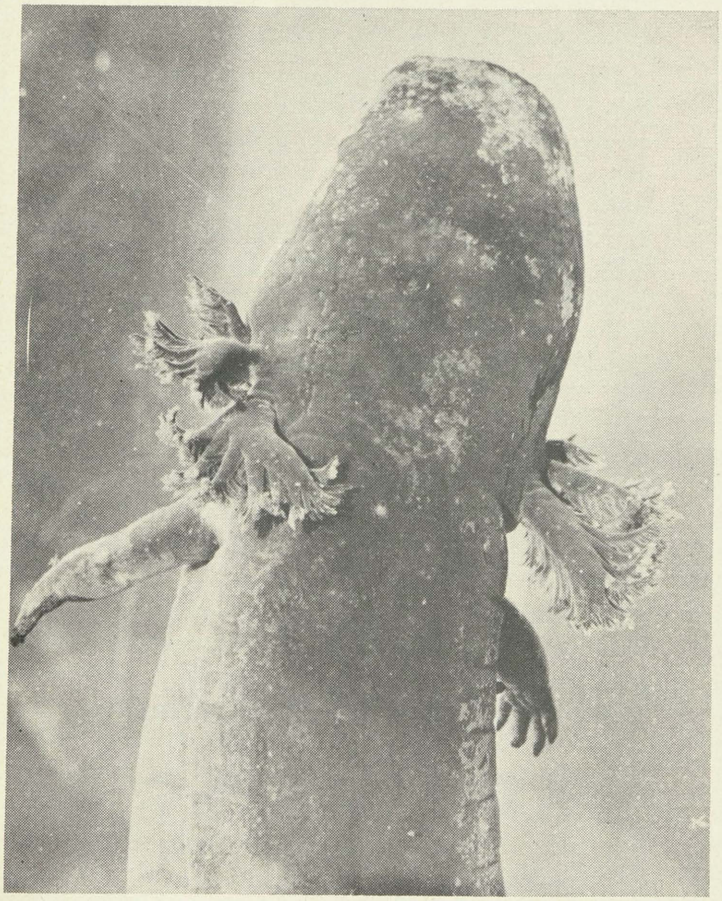


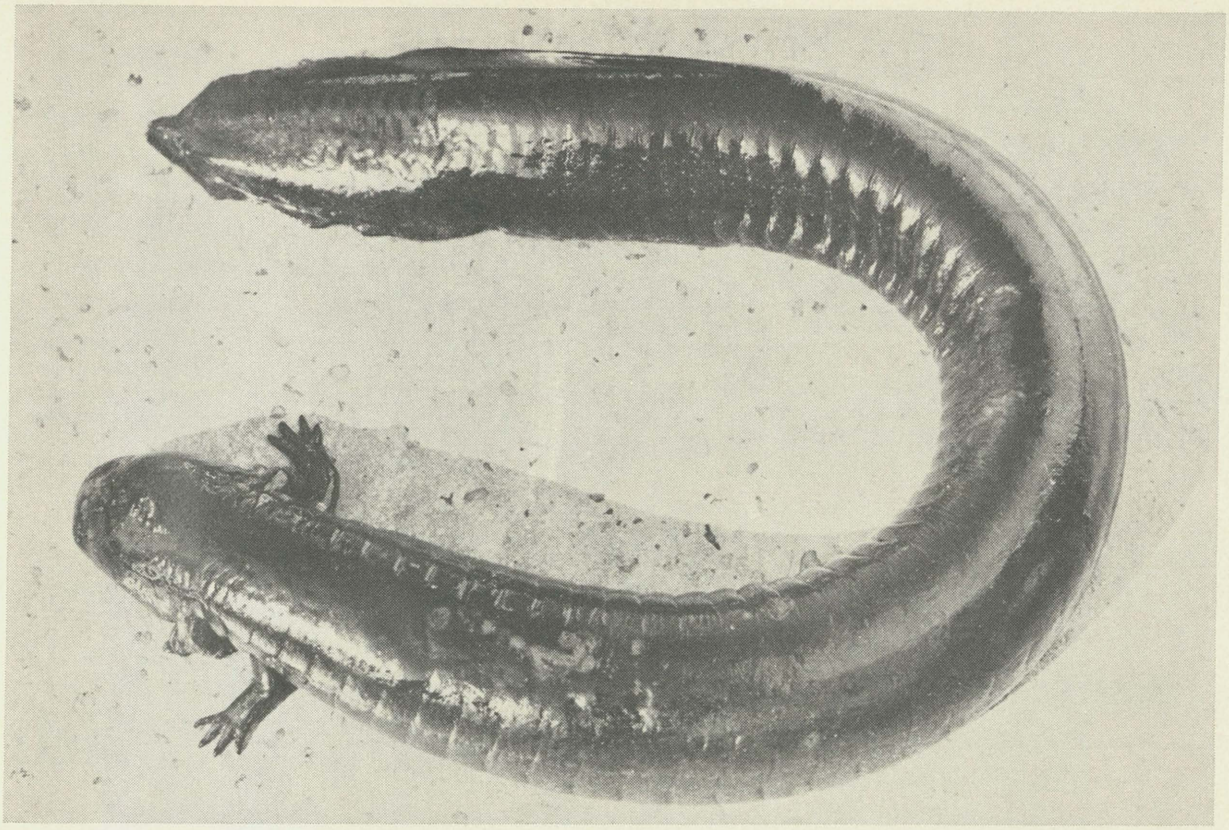
Not a fish, not a snake, not an eel, not a lamprey. It's a siren, one of the salamanders. Common in Florida, the siren is quite shy. The bushy growths are external gills. Sirens are toothless and almost sightless. They are helpless, harmless, and hopelessly homely. The pictured specimen was collected by fishery biologists Dennis Auth and David Cox at the confluence of the Suwannee and Alapaha rivers in Northeast Florida region.

the Greater Siren

By GENE SMITH

Photos By Wallace Hughes





THE GREATER SIREN (*Siren lacertina*), sometimes called a mudpuppy, is one of a varied group of amphibians, the salamanders. Some forms of true salamanders are lizard-like and live on land, while others, like the several species of sirens, are strictly aquatic.

The sirens are found in many situations—muddy ponds, roadside ditches, lakes, streams, and even in polluted and stagnant waters. A favorite haunt is in shallow water beneath the weeds or a mass of water hyacinths.

Like most salamanders, this strange, eel-like animal is more abundant than is commonly supposed. But he is not often encountered by casual outdoorsmen; only by the curious.

If ever you see a Greater Siren close up you'll never forget him. No other creatures, not even snakes or eels, look exactly like him. (A smaller siren, aptly named the Lesser Siren, is his closest relative and nearest look-alike.)

One's eyes are immediately drawn to a pair of degenerate front legs—obviously useless for propelling the long, heavy body—and to a neighboring pair of brushy appendages positioned slightly behind the head. These are *external gills,* through which the siren takes oxygen from the water. The sirens have four toes on each foot.

Locomotion is provided by its well-developed tail fin, which, through evolution, has taken over the function from the unneeded legs. Neither siren has hind legs . . . not a sign of any!

For the sake of comparison, two other large, aquatic, eel-like salamanders are found in Florida: the Two-toed- and the Three-toed Amphiumas. They have *four* useless little legs and no external gills.

Adult Greater Sirens range from 20 to 30 inches in length, the maximum being about 36 inches. The Lesser is only 8 to 12 inches long. Both are nocturnal in habits. They scrounge around the muddy bottom where they are able to capture only the slower animal forms for food—crayfish, worms and mollusks; insects, some vegetation and similar debris taken in with their animal food.

The siren is a mild-mannered, toothless, practically blind creature, positively harmless—in and out of the water. When taken from the water it may utter a series of weak crying sounds not unlike a newborn puppy's helpless yelping.

It reproduces by laying eggs in the water. Fertilization is accomplished externally. Even the terrestrial salamanders that live under rotten logs and damp leaves return to the water to lay their eggs.

The Greater Siren ranges only along the Atlantic coastal plain from the District of Columbia through Florida and to extreme south Alabama. The Lesser is found from South Carolina through north Florida, up the Mississippi to Illinois, and west to east Texas. ●

Provide Habitat
PLACES WHERE WILDLIFE LIVE
NATIONAL WILDLIFE WEEK 1969
March 16-22
Sponsored by the
NATIONAL WILDLIFE FEDERATION
and State affiliates

MOUNTAINS, seashores, and towering forests usually come to mind when we talk about natural resources. Conservationists are warning that another resource, our abundant wildlife, could be lost in the path of progress and expansion. These hallmarks of civilization take an ever-increasing toll of natural areas, destroying them as homes, or habitats, for wildlife forever.

Once America was a land of forests, marshes, woodlots and fields, with clean water and fresh air. Wildlife seemed a part of every landscape. Now the serene countryside is being transformed into a land of sprawling suburbs, giant airports, super highways and mammoth shopping centers. As these appear, the living space for our wildlife vanishes.

Before it is too late, we must stop and consider what this loss of natural environment will mean. Animals from deer to robins need food and cover, clean waters, and room to roam—if they are to survive. Areas destroyed by our civilized progress are finished as far as wildlife habitat is concerned.

Spaces for wildlife cannot be treeless subdivisions; they cannot be factory sites or drained marshlands; they cannot be stream beds for sewage or speeding lanes for power boats.

Providing habitats, those vital living areas for wildlife, is a matter of choice and economics. The choice is simply: "Do we value this heritage of natural beauty?" If so, we must decide that the beauty of wild animals in natural settings is worth the expense and effort of developing and protecting habitats.

The presence of wildlife in our fast-moving world means that we have not yet destroyed the delicate balance of nature. The prospect of moon travel may fire our imaginations, but the wild beauty of this world is unbeatable for giving a little peace of mind. To ensure a future for this great natural heritage, the National Wildlife Federation, during Wildlife Week, March 16-22, is urging us all to "Provide Habitat—Places Where Wildlife Live." ●

National Wildlife Week
March 16 - 22, 1969

Sponsored annually by the National Wildlife Federation and its state affiliates, National Wildlife Week is planned each year to include the first day of Spring. The original proclamation was signed in 1938 by President Franklin D. Roosevelt.

By WERNER O. NAGEL

habitat improvement

Photo By Gene Smith

Fundamental needs of wildlife are known to be food, cover, water and living space. Without provision for all four, wild creatures cannot survive. Man's rightful domination and his use of natural resources must allow for fish and wildlife's requirement for life.

OVER THE VAST, varied landscape of America, the whole assembly of earth and plants and water and rocks supports some kind of wildlife. In the short grass or tall trees, tiny pool or huge lake, deep soil or barren rock, some kind of life finds its food and shelter and room to live. In this great variety of life there are some special kinds we enjoy as fish or game, and would like to see in greater abundance, more widespread. Each of these species has its special living needs, which together form its habitat requirements. Improvement in the quality and amount of these special habitat items is key to the abundance we desire.

A key is a tool with an arrangement of notches patterned to open a particular lock. The "notches" on the habitat "key" are four: food, protection from weather and enemies (cover), water and living space. These are the four great needs of all life, and for wildlife they must occur where wildlife lives—in the wild.

Just as there is a specially-designed key for each type of lock, so there is a certain design of food, cover, water and living space that works best for each major type of game. The design that opens the door to abundance for one species may not fit another species at all. The plants and open breadth of the plains that support antelope are quite different from the woodlands favored by gray squirrels. The warm, turbid waters that produce catfish and carp will not support trout and smallmouth bass, which like their waters cold and clear. The earth-bound cottontail rabbit needs the dense ground cover that is avoided by the fast flying dove.

But though there are many different habitat arrangements, all must satisfy the fundamental needs—food, cover, water and living space. And, for each wild species, it is how well its own particular needs are met that determines its abundance.

Food

IT TAKES A GREAT variety of food to meet all the different wildlife needs. Yet there are some attributes that all wildlife foods must have in common, to meet the needs of any wildlife species.

Abundance: If the food supply for any species is short, only the number of individuals that get enough to eat can live. More than that: most wildlife has to find food each day, every day in the year. Thus, to support a satisfactory wildlife population, sufficient food must be available the year around.

Quality: Nutrition, or the nourishing quality of food, is a popular subject these days. On the air and in print we are told that livestock and poultry, as well as humans, need nutritious food. Wildlife also requires food of high nutritional quality for health and ability to produce abundant, vigorous

(*Continued on next page*)

Werner O. Nagel is a biologist of many years' experience in wildlife research and management. He is Senior Biologist in the Fish and Game Division, Missouri Conservation Commission, and the author of numerous technical and popular articles on wildlife conservation.

(*Continued from preceding page*)

young. But for wildlife this quality must be available in the natural food: we cannot supply it in the form of concentrates and supplements as we do for ourselves and our livestock. Thus the soil must be fertile enough to supply wildlife foods with the proteins, minerals, vitamins and other food elements according to the needs of each species.

Distribution: To supply any kind of wildlife, food must be located where the animals are protected while they are feeding. That differs with the species. Antelope, which depend on eyesight and speed to escape predation, need their food out in the open. For bobwhite quail, who need overhead protection from winged enemies and surrounding cover from the four-footed predators, food should be available in or very near good cover.

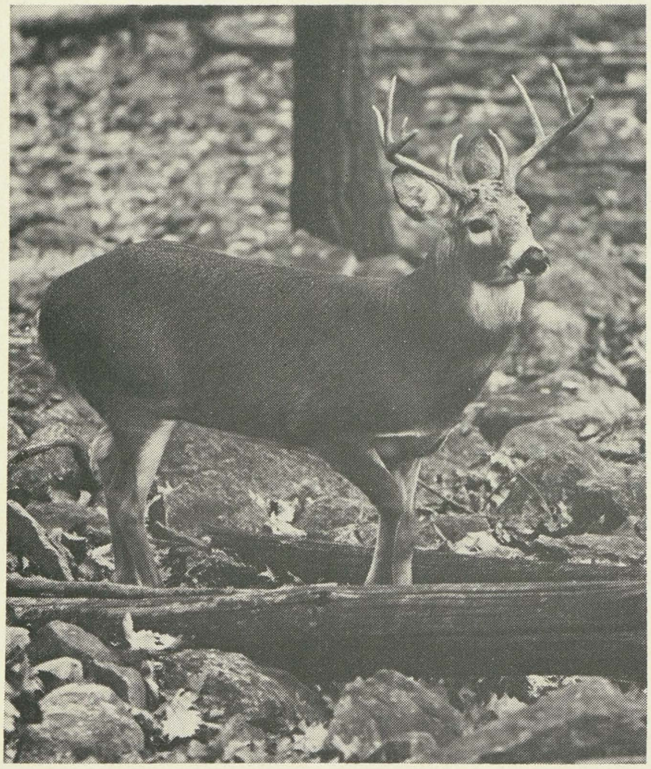
Distribution is important in another way. No wildlife species takes well to overcrowding. In concentrations, wildlife is more susceptible to disease and predators, as well as to hunting. Also, since wildlife goes where the food is, a more extensive pattern of food distribution results in more widely spread game and greater opportunities for more people to enjoy more freedom in sport.

Cover

COVER IS ANY MATERIAL thing that protects wildlife by concealing it from enemies, or hampers them in pursuing it, or protects it from weather. That might be a den in a brier patch for a cottontail, a whole forest for a herd of deer, or a deep pool for beaver or fish. Cover often includes "housing" (as the rabbit den), but it also includes the protective medium in which wildlife moves around and carries on its life activities.

Different species have different cover requirements, and each species needs several different kinds of cover. The bobwhite can use annual grasses or weeds for summer nesting cover, but for winter protection needs durable vegetation that resists snows and offers concealment when summer foliage is gone. Waterfowl nest and raise their young and moult where surrounding water or dense vegetation offer protection from predators, but as adults or in migration the middle of a wide stretch of open water is often their best protection. The fox squirrel may spend much of the summer in a nest of leaves, but in winter seeks the protection of a hollow tree. All in all, most species need cover where they can rear their young in safety, get their food without exposing themselves too much, and find shelter from heat and cold, rain and snow. Deficiency in any of these cover needs results in losses which cannot be made up until that deficiency is corrected.

Photo By Leonard Lee Rue III



Land use changes that opened up the American continent have favored whitetail deer production. They like thick cover for resting but open, or broken, vegetation types nearby for feeding. They do not migrate from place to place for their food.

Water

WATER IN SOME FORM is an essential part of all wildlife habitat. The kind and amount of water needed varies with the species: for fish, it is the source of food and oxygen as well as being cover and a medium of transportation; for waterfowl it supplies food as well as protection from enemies that cannot fly or swim. All wildlife needs water in the diet: most drink it, but some get their water needs from succulent vegetation and/or dew.

Water is also an important medium for producing many kinds of foods for many kinds of wildlife. Some examples are: microscopic plants and animals to feed minnows and other small aquatic life, which in turn furnish food for larger fish and other small aquatic life, which in turn furnish larger fish and other animals; larger plants and aquatic animals which feed waterfowl and muskrats and larger fish; frogs and crayfish as tid-bits for mink and raccoon; salmon for bears—there are many others. And water as cover or protection is necessary to many kinds of wildlife.

All in all, the well-balanced water area, with the vegetation that grows in or near it, produces and supports rich and varied wildlife populations. The extent to which it can do this depends on two things: the fertility of the water itself, as determined by the watershed, including the soil which forms its bottom and banks; the absence of pollution unfavorable to aquatic life.

Living Space

THE NEED OF WILDLIFE for "living space" to carry on its activities is often overlooked. Under "FOOD" we said that overcrowding is bad for wildlife, because it increases the chances for disease, predation, and over-hunting. But there is more to it than that. For example, it seems difficult to build up bobwhite populations to more than one bird per acre though it's quite possible to provide food and cover enough to take care of 10 times that many. For each wildlife species, there seems to be a need for a certain amount of space to move around in, varying according to the nature of the species. Partly this is a matter of getting the amount and variety of food and cover it needs; partly it is a way of avoiding predators; with some species, it is tied up with migration, and with others it is a means of mixing up families so that inbreeding isn't so common. There are other reasons, and one of them may be that wild animals just like to move around, or just don't like to be crowded. Whatever the reason, "living space" is an important factor in wildlife habitat.

Carrying Capacity

FOOD, COVER, WATER and living space: together, these essentials of wildlife habitat add up to something called "carrying capacity." This is simply a measure of the number of animals a certain area can support, or carry, at a given time.

Carrying capacity may vary from year to year, and usually within a year. The seasonal variations are due to seasonal changes in production and availability of food, cover, and water, which may be influenced by land use. Even without cultivation, grazing, clearing, etc., and area of quail territory can support many more quail in early fall than it can in early spring. The food and cover from summer's growth is most abundant and widespread in early fall: by early spring most of the annual vegetation has withered, much of the food is eaten or spoiled. Add the effects of grazing, fire, etc., and even less is left for quail. The low point in carrying capacity for many species comes when weather and other factors have taken their annual toll of food and cover, and the new growth hasn't yet come on.

Another critical point in carrying capacity is during production of young. This is not just a matter of plenty of good nesting or breeding places, and plenty of good food and cover for the young: food for the adults is also important. A poorly-nourished animal is not an efficient producer. It takes plenty of highly nutritional food to put wildlife into good breeding condition.

Carrying capacity is the sum total of all the factors of habitat necessary to wildlife livelihood. It influences the number of animals that are produced and survive for our harvest; how many will fall to predators, and how many will escape; how many will survive the winter, and how many will be left to reproduce. On the modern landscape carrying capacity is determined, most of all, by what we do to the waters and the land.

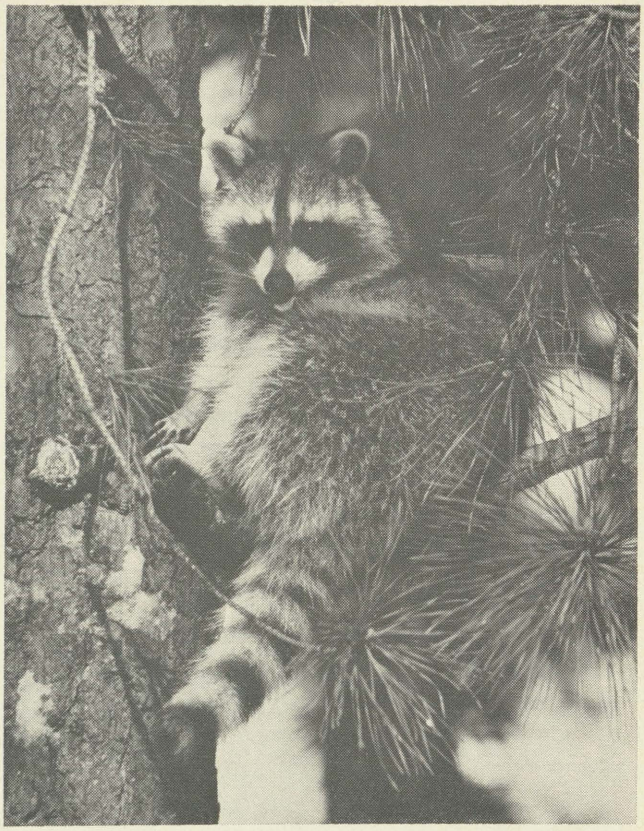


Photo By Leonard Lee Rue III

Some wildlife, like the carefree raccoon, is adaptable to manmade environmental changes. Some, like the Everglade kite and alligator, require specialized habitat and food.

Predators as a Factor in Wildlife Habitat

PREDATORS ARE GENERALLY thought of as problems in livestock and wildlife management. Yet predators are a necessary and even beneficial form of wildlife in themselves, and in their influence on other species. Actually there could be no WILDlife, as we know and enjoy it, without predation.

Think about that a minute: what is there about wildlife that we value so much? What's that special difference that makes us thrill to the sight of a deer bounding through the woods, and ignore the steer grazing in the field? That sends us a hundred miles through the dark of night to wait shivering and tense on the chance of decoying in and downing a ($25.00) duck and grumble at having to walk two blocks to buy a delicious ($1.50) spring chicken? Why do we never brag about our exploits in the fish market, but talk endlessly about the two-pound bass we caught—and take even greater delight in telling about the big tackle-buster that got away?

(Continued on next page)

(*Continued from preceding page*)

We could give a lot of explanations about these things, but they all add up to one: wild creatures have a special value and attraction over tame ones, because they are wild. You cannot actually "pursue," "outsmart," "outfight" or even "hunt" a creature so tame it stands and looks at you, or too stupid to get out of your way. We want our game to be vigorous, alert, shy—and just smart enough so that when we bag one, we can feel that we've accomplished something. We want WILDlife.

There is only one reason why a creature is alert, smart, elusive—wild: that is because it must have and use these qualities, every day of its life, to avoid being caught and eaten. Any creature that catches and eats other creatures is a predator: avoiding predators is what keeps wildlife wild.

Wildlife Habitat Today

WE'VE SUMMARIZED the various factors of good wildlife habitat. Now let's look at the wildlife habitat of today, see how it meets these requirements, and what can be done to improve its capacity to support more abundantly the game we enjoy.

To do this, we have to look at game habitat in the light of our own use of the land. Whether we like it or not, it is our use (or abuse) of the land and water to meet our own needs (or wants) that's shaped the pattern for wildlife, and will shape it in the future. Also, we must face the fact that *we cannot use the abundance and variety of wildlife of the past as our standard for the present or the future.* We cannot go back to the use of the past, and therefore, our only hope for increased abundance of wildlife lies in a realistic appraisal of what can be done to maintain or improve its living conditions, in the light of our own demands upon the land.

This makes the restoration of wildlife habitat seem like a tough problem. It is: some things about it aren't a bit pretty, and using pretty words about them won't make these things any better looking.

A gully-slashed field, for instance, is as un-pretty as a throat-slashed calf. And all the gullied fields, all the fields not gullied but close-cropped, all the grain and livestock raised and eaten tell you what's happened to wildlife habitat, in three, one-syllable words: we ate it!

That is a pretty strong statement, yet it isn't the whole truth. We're also wearing some of our wildlife habitat, and some of it goes to keep us warm and give us a place to come in out of the rain. We're wasting a lot of it, polluting much of it, and sending quite a bit of it abroad. There are many other ways in which we are using it; and they all add up to the fact that, in meeting our own needs and desires, we are often in direct conflict with the needs of wildlife.

Some conflict is unavoidable, but much of it is not. Human *uses* cannot be argued—but *abuses* definately can! We cannot place wildlife needs before our own, but we can certainly avoid needless destruction of natural resources and thereby save much valuable wildlife habitat. As long as we expect our wildlife to be produced in "left-over" habitat, we can expect only a "left-over" kind and abundance of wildlife.

Habitat destruction is only part of the story. Very closely tied up with our use of wildlife habitat for other purposes is the change in habitat itself. Most of America's farmlands, a lot of the forestland, and some of the remaining "wild" lands are now covered with plants that didn't grow there before we introduced them or that didn't grow abundantly before we encouraged them by our use of the land. Some wild creatures, closely adapted to the original vegetation, couldn't get along with these new plants. To these species the change in cover and food was deadly.

The changes in wildlife habitat due to land use and differences in plant abundance were by no means all unfriendly to *all* wildlife. The early cultivation of areas of tight prairie sod and clearings in the vast forests permitted the growth of more favorable native food and cover, to which some farm crops also contributed. This was a break for some wildlife for which originally there was too much of a few kinds of vegetation like trees and grass, and too little variety and abundance—particularly of annual food plants. Actually, the decades when new farms were being carved from virgin forests and prairie were a wonderful age for farm and forest game, and it fairly swarmed in the newly-opened areas.

In this period also many of the natural swamps and marshes and the more remote forests hadn't been drained or cut over, because it was still uneconomical to do so. These areas supported the original wildlife, not just the kind encouraged by cultivation. So right in this "in-between" period wildlife was abundant not only in numbers, but in variety of species as well.

The favorable point for many species was reached and passed, though, when the extent and intensity of land use went too far. Now we're right back again to broad areas of fewer kinds of plants, like wheat and grass or forests of mostly "timber-type" trees. A new twist has been added, too: many of

---

The National Wildlife Federation has promoted nationwide Wildlife Week since 1938. The organization represents two million persons in state conservation organizations, associate members and contributors. Since its founding in 1936, the Federation has coordinated conservation efforts with educational programs directed toward sound management of natural resources—soil, water, forests, rangeland and wildlife.

Photo By Jim Reed

In the case of our national bird, the bald eagle, there is deep concern that it may fail to survive. Not only are the wilderness sites unavailable; the bird lays only two eggs. Pesticides are said to be making some of these eagle eggs infertile. Only Florida and Alaska are reporting successful nesting of this magnificent bird—an American symbol.

these broad areas of cover are levelled not just yearly, but even more often as we make land produce more than one crop. At the same time, increased demands and more efficient methods have made drainage and intensive forest use profitable and the natural habitats are shrinking fast. Meanwhile two relatively new and deadly enemies of wildlife—chemical weed killers and insecticides and industrial pollution—have been extended into more and more of the farmlands and the remaining water habitats, with disastrous results to many species.

Change and destruction together—plant replacements, fire, cultivation, grazing, drainage, pollution, and "chemical farming"—on ever-larger areas and with increasing intensity—have continued to accelerate the loss of wildlife habitat. The result has had a kickback aside from reducing certain game: it has been favorable to decided increases in some rodents and, automatically, in their predators—some of which we agree we can have too many of! All in all, what we have left in wildlife is exactly what we have left in wildlife habitat.

This is a brief history of a great change. As history, it's interesting: but as background it's a revelation of the size of the problem, and what we can do about it and what we can't. The main thing that the history of the use of the land for our own needs tells us is this: except perhaps on certain dedicated public areas, such as wildlife refuges, no land or water of recognized higher economic value for other uses is going to be allowed to remain untouched primarily for wildlife use; no plant that hasn't a definite use in agriculture or forestry is going to be let grow on private land that can economically support other plants more useful to man's own immediate needs.

That's *legitimate* use we're talking about, without reference to abuses and mistakes. So there's no use dreaming about *restoring* wildlife habitat if we mean bringing back original conditions on lands used for our own needs. There's no use dreaming of *preserving* for wildlife habitat lands and waters with higher priorities for our own needs. In fact, there's no use dreaming at all if we are to increase wildlife, we must face facts—the facts of our own needs for food and shelter, as well as the needs of wildlife for these things.

This does not mean that the problem is hopeless—far from it! There are at least four ways of producing more wildlife without cutting down on the number of beefsteaks, houses and shoes we need. In fact, one of those ways will actually give you steaks that are more tender and nutritious, and better shoes and housing!

One approach is to make every bit of land still available for wildlife more productive, and to make land and water used primarily for other purposes produce as much wildlife as possible without conflict with the main purposes.

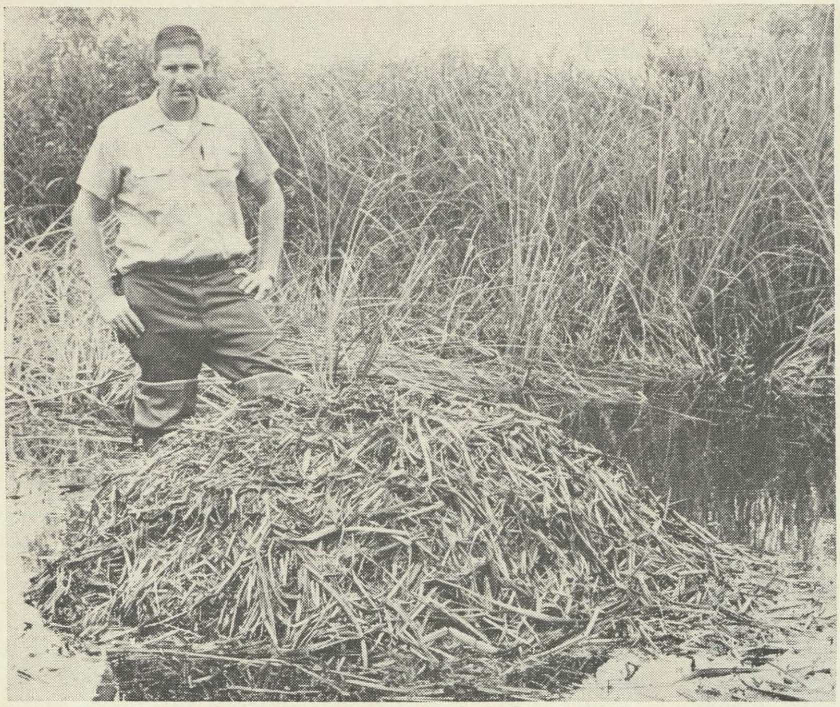
A second approach is to find substitute plants that will furnish good wildlife food and cover while they perform a useful farm function.

A third approach is to investigate the possibilities, where we cannot keep or restore native habitat for native wildlife, of finding new kinds of wildlife that thrive in the new kind of habitat.

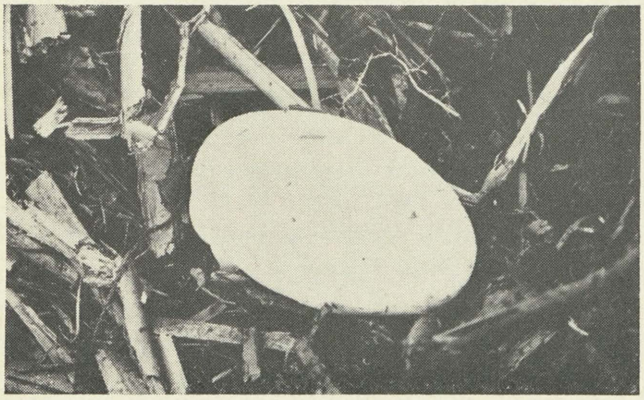
The fourth approach is in "reverse": along with these things to *do*, to *produce* more wildlife, there are things we can justifiably *stop* doing, to *preserve present* wildlife. These are things like unwise drainage, pollution, over-grazing, burning, and other mistakes or excesses that are not only harmful to wildlife, but also economically unsound.

Above all, we need to take a more realistic and practical attitude toward wildlife itself. To realize that it is not only of interest to us, but that it also has a very definite economic value. That when 25 million people spend somewhere around $3 billion a year in activities associated with the enjoyment of wildlife, it is far from being an economic stepchild: it is a major natural resource! That when we destroy a natural resting ground for wild geese, we may be literally killing the goose that laid golden eggs—in return for temporary extra cash and commodities we don't really need. ●

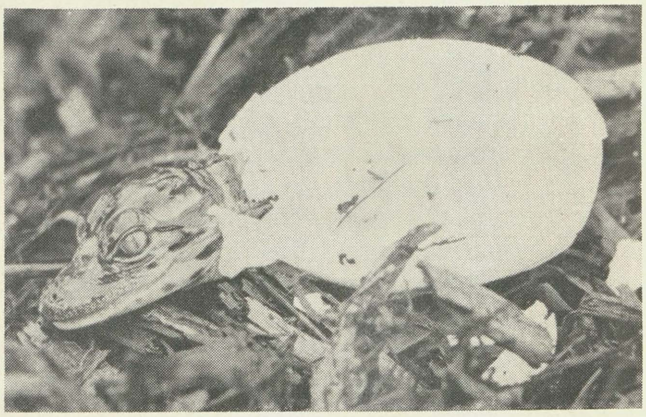
to be continued in the next issue



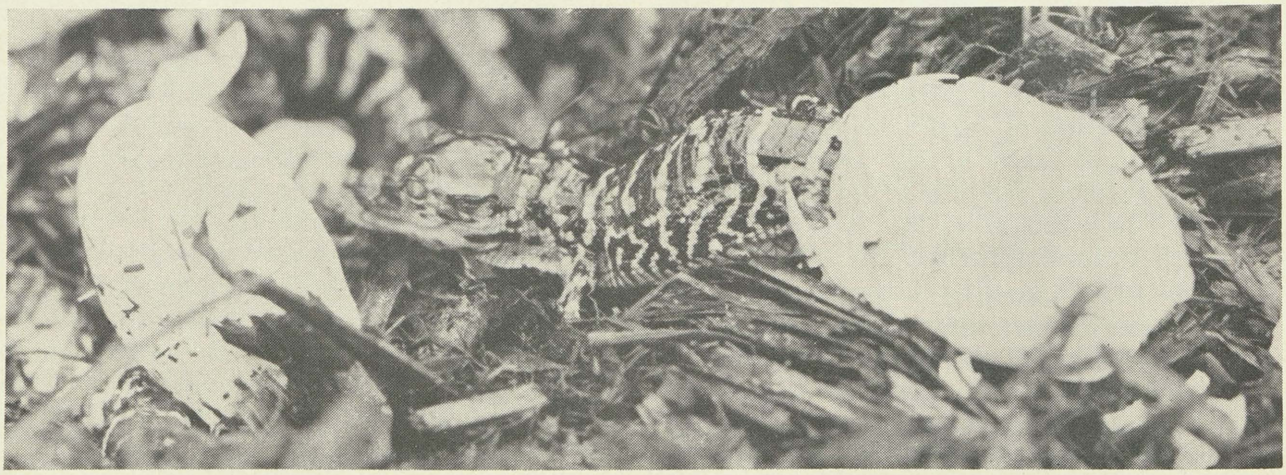
gator coming out party

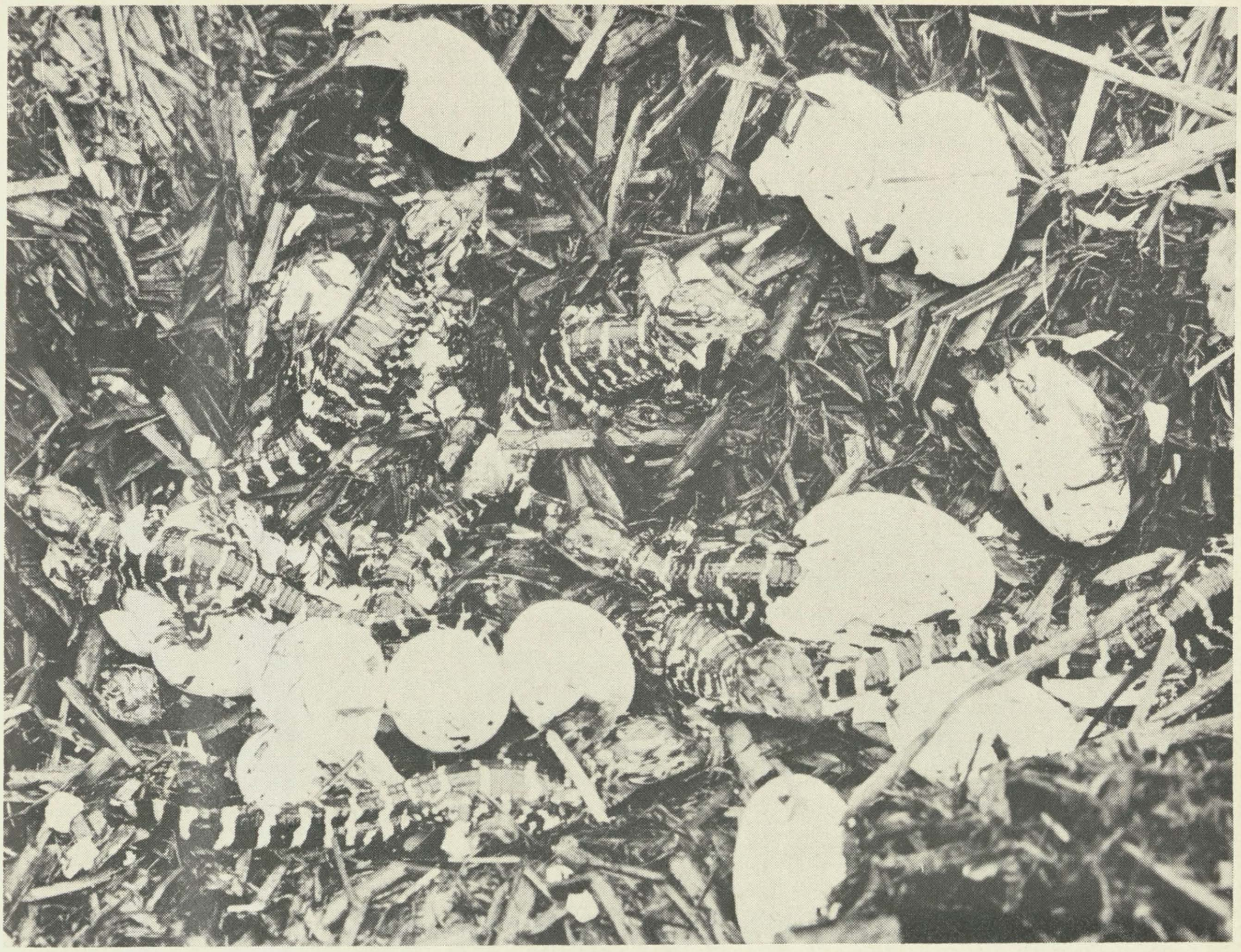


Game Manager John Chenowith, above, standing beside alligator nest gives indication of the large size—it's 6 feet, 8 inches across; 3 feet, 6 inches high. The gator egg, shown at left, is beginning to hatch. Note the bulge on the left side of egg below midline where the membrane protrudes through cracked shell.



"Hello World!" says the emerging baby gator, right, before he scrambles out of shell and immediately heads for water, below. The newly hatched youngster is 9½-inches long, and easy prey for enemies this age. Note protective coloration.





Baby alligators, above, are self sufficient from the start. Two hours after the first egg hatched, all 31 young were in the water. Eleven eggs near the bottom of clutch, below the waterline, did not hatch. The youngster at right, the last to leave, had escaped from its shell in only seven minutes.

photo story
By **MIKE FOGARTY**

LAST SUMMER Game Management personnel made regular visits to 20 alligator nests located in Conservation Area 3-A of the Everglades Wildlife Management Area. These visits were made in connection with a research study to determine what effect heavy spring rains, with resulting high water, would have on hatching success.

Water levels began to rise rapidly near the end of June 1968—just as the female alligators were beginning to deposit eggs in their new nests. The rising water prevented some females from laying. We found slightly over 25% of the nests were empty. Of the 14 nests which contained eggs, 10 were covered with water. Another was destroyed by a hog. Only three produced young.

One nest had six young gators; another, eight. The third nest, the 17th to be found, produced 31 baby gators out of 44 eggs. Our gator "coming out party" was photographed as this nest hatched. ●

IF YOU THINK an Everglade Kite must just be an ordinary type of kite made of paper on a frame and flying at the end of a string over the Everglades, you have a lot to learn—as I did—about Florida's wildlife.

It helps in discovering south Florida's bird life when your father-in-law has made a second career of conducting bird tours of Lake Okeechobee and its environs.

That's how I am able to glean firsthand the knowledge of L. Thayer Stem, Jr., proprietor of a fishing camp on the west shore of the lake, who has been singled out by both government conservation agents and officials of the state and national Audubon societies as an authority on the bird life of the region.

This 'bird man of Lake Okeechobee' is especially sought as an expert on the status of the Everglade Kite, the rare species of hawk found in southeast Florida and which periodically has faced extinction during critical water shortages.

Seeing a kite use its long, hooked beak to extract the meat from the fresh-water snail that is the bird's only food is always the highlight of any birding expedition on the lake.

It was seven years ago as a college journalism student that I first viewed kite nesting grounds on Lake Okeechobee. Since it also was during one of the lake's low periods, we waded waist-deep into Moonshine Bay and spotted the birds by their white band across the base of the tail.

Returning to the University of Florida with the idea of writing a feature article on the kite, I did further research and consulted with Dr. Oliver L. Austin, Jr., curator of the Florida Museum in Gainesville, who promptly informed me that my future father-in-law probably had seen more Everglade Kites in the last ten years than any other man in Florida.

In fact, his career as a guide began inadvertently in 1950 when the family purchased the fishing camp and learned it was a luncheon stop for official Audubon Society tours which then were originating out of Okeechobee and Clewiston five days a week during the winter months.

The Audubon tour director was Alexander Sprunt, Jr., author and ornithologist of Charleston, S.C., who now spends winters as the Society's representative at Caribbean Gardens near Naples and still visits Stem's Camp.

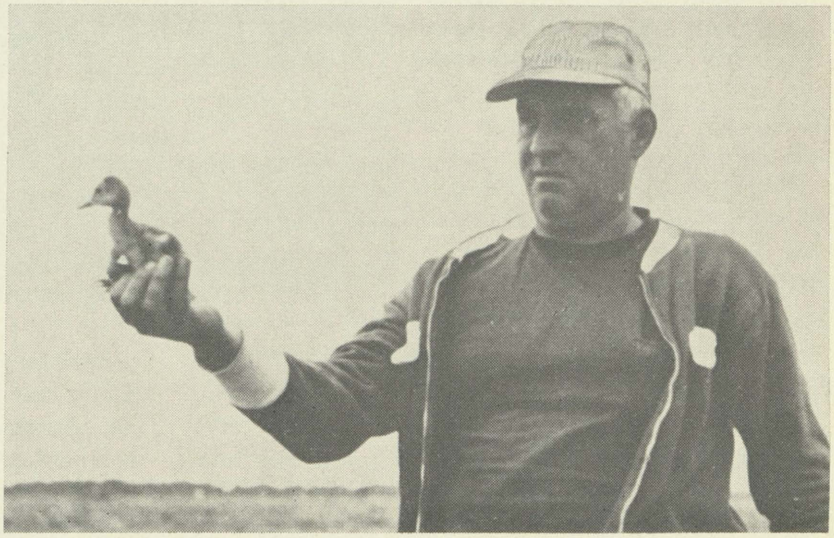
It was arranged that Alma Stem would take over

BIRD MAN

of Lake Okeechobee

Photo By Lovett Williams

The Sandhill Crane, left, is always high on the list of "requests to see" by visitors on guided bird tours. The rare Everglade Kite, above, is the prime attraction in the Lake Okeechobee area. Thayer Stem, right, holds a fledgling Crane. He has probably observed more Everglade Kites than any other watcher.



By **CAROL STEM**

preparing meals for the birding parties. The host, meanwhile, began going out into the field on his own ahead of time to locate the different species. Many guests on the tours later returned to the camp to be guided by the owner, and his "bird business" began.

Since then he has hosted individuals and groups from all over the world: Japan, Germany, Austria, Holland, Sweden, Switzerland, France, England and Canada. Members of the Congress of Foreign Ornithology visited the fishing camp in 1962 and individuals whom he has guided range from the president of the Japanese Association for the Protection of Birds to an Englishman on vacation from his position with the World Bank.

Audubon Societies throughout the United States have directed members to this Okeechobee guide with the result that he has been written up in Audubon publications as far away as California.

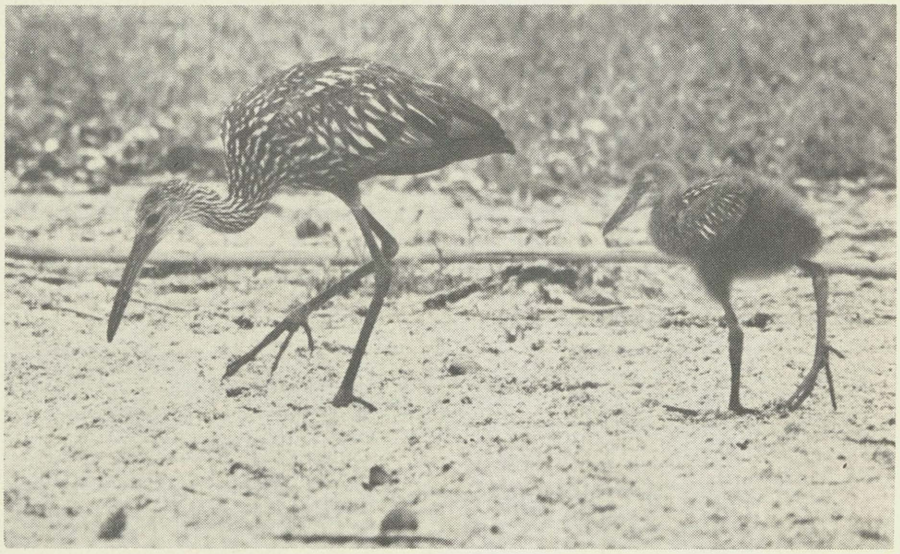
Each visitor signs the camp guest book and notes what species he saw for the first time.

The guide himself probably has spent more time seeking and observing the Everglade Kite than any other bird. During a year he served as part-time Audubon warden, he kept detailed records on the status of this rare hawk.

Based on weekly patrols, he submitted reports in which he estimated numbers and kinds of all birds he had observed roosting, feeding and nesting and

(*Continued on next page*)

Photo By Lovett Williams



Favorite birds of those on south Florida tours include the White Pelican, above, a western bird that visits Lake Okeechobee in winter months, and the Limpkin, right, a Florida dweller shown here with its downy youngster.

Photo By Mike Fogarty

(Continued from preceding page)

reported also any unusual happenings or disturbances of birds, or other wildlife.

In 1965, however, he conceded to a new full-time warden who was assigned to cover both the lake region and Kissimmee Prairie.

Although no longer patrolling officially, he still keeps a close watch on the kites in frequent trips on the lake.

Most of his knowledge has been gained from personal experience and observation but he also has studied bird life and has acquired a small library of about 25 volumes on birds and other wildlife. Albums filled with photographs taken by delighted guests who made an extra print for their guide are displayed proudly to each new visitor.

The two most basic books are Roger Tory Peterson's A FIELD GUIDE TO THE BIRDS, containing field marks of all birds east of the Rockies and Arthur A. Howell's FLORIDA BIRD LIFE. At least two other volumes are special to the collection because they are autographed by their authors, whom the receiver aided with local research. They are the supplementary volume to FLORIDA BIRD LIFE, authored by Sprunt and BIRDS OF THE WORLD with its text by Dr. Austin.

Besides the kite, other area "specialties" which "birders" most often request to see are the caracara, sandhill crane, glossy and white ibis, limpkin, cattle egret and burrowing owl, as well as the wild turkey and Florida species of the bluebird and scrub jay.

Winter favorites of visitors are the white pelican, a western bird which many Easterners get to see only when it migrates to the lake, and the colorful painted bunting, attracted with a specially built feeder designed to accommodate only these tiny birds.

When guests are in the camp, the feeder just outside the dining room window is baited, bringing the buntings so close that they may be seen clearly without field glasses.

You don't have to marry into a family with an expert to discover nature.

But having a "built-in" guide makes going home to see the folks a perpetual tour of South Florida's bird life. ●

Who Owns The Game?

conclusion

By **ERNEST SWIFT**
National Wildlife Federation

As our civilization in these United States becomes more complex and beset with new and vexing problems, the individual states face new challenges. If they are to retain their traditional and legal prerogatives, they must accept their responsibilities on a high plane of integrity so as not to be overthrown by impatient minorities who view Federal sovereignty as the only classical virtue.

In the matter of protecting natural resources no one would be foolish enough to argue that the states have advanced to a Utopian idealism with uniform objectivity. Nor can any historical documentation give the Federal government any special badge of merit.

The Atlantic seaboard states were nearly 125 years old when New Mexico and Arizona came into statehood as frontier territories. The resources stored up through eons of time had made possible the heroic age of exploration. Later they were responsible for the creation of the greatest free nation on earth. Wildlife was elemental to survival for food and clothing. Even after the era of exploration, hunting was still as much a part of frontier life as was tilling the soil or plying a trade. Yet throughout all that time of pioneering and conquest, the collective ownership of wildlife by each state was never questioned. The Colonials and the westering migrants wanted no part of the European tradition where a man could be hung for poaching a rabbit.

When the time arrived for the protection of game through the enactment of laws, they were fiercely adamant that all game come under the collective ownership of the states. Colonial laws prior to the adoption of the Constitution attest to this tenet.

As the great western migration advanced and new states were created, laws were enacted to give protection to the diminishing game species. The fact that these laws were often on the liberal side or loosely drawn and often poorly enforced does not negate the recognition of state ownership. Even when land was homesteaded or purchased after the creation of a state, the implied covenant of state ownership of all game on all land went with the title. It didn't have to be written into the deed because the State's laws already covered the issue. Rudimentary state laws did not save the passenger pigeon nor did any Federal laws save the bison.

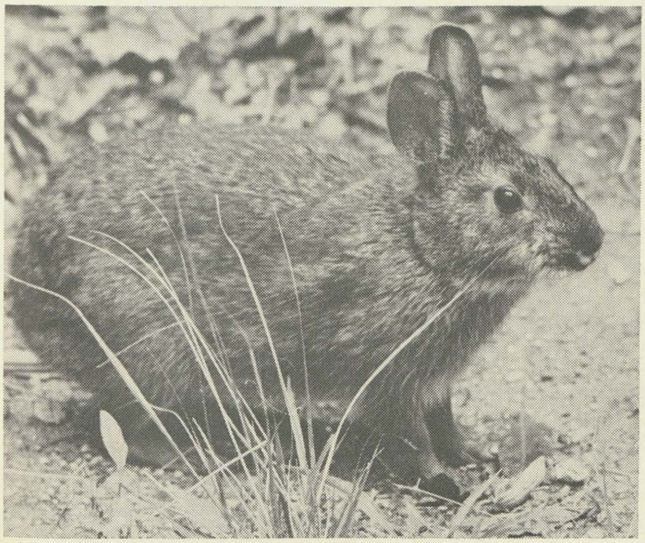
Now the traditional and legally accepted authority of each state to protect and manage its resident game is being challenged by the Department of Interior.

The entire and laborious system of state conservation agencies has been built block by block both on tradition and legal documentation as to the ownership and control of these resident species. Even the control of migratory waterfowl by the Federal government was held unconstitutional until covered by an International Treaty with Great Britain and later with Mexico.

Successively the states adopted various forms of licenses as a practical means of raising funds to

(*Continued on next page*)

Photo By Wallace Hughes



From the days of New World colonization, through westering pioneer times, to the present, Americans have wanted no part of the European tradition that could have a man flogged—or even hanged—for poaching a rabbit. Ownership of game and fish by the people came about by explicit laws, not accident.

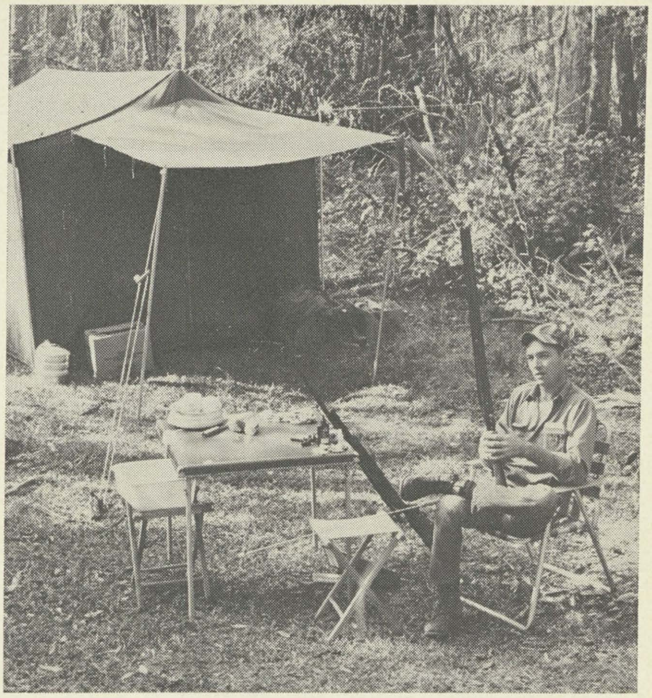


Photo By Gene Smith

A generation of "Johnny-Come-Lately" preservationists claim hunting is all wrong and lacks esthetics. Few of them ever lobbied for funds for wildlife management.

(*Continued from preceding page*)

manage wildlife. There were few if any bleeding hearts around during all those pioneering efforts to lobby for funds from the general coffers to do the job. The hunter wanted to hunt and the fisherman wanted to fish, and they were willing to spend money for the perpetuation of wildlife. They have always had their differences as to what constitutes management; some are conservative, others liberal, some greedy. But most important—despite imperfections at the state level, many wildlife species have been saved from extinction and a few have increased; and most of this happened when there was no Federal machinery to save any wildlife.

Now comes a generation of "Johnny-Come-Lately" preservationists who claim that the old system was all wrong; that hunting implies a low mentality and greed, and total lack of esthetics which is repulsive to their sensitivities; that the states are money hungry, muddlers and incompetent.

But they were scarce as hen's teeth when the liberal-minded mass of the great unwashed were attempting to devise some means of wildlife conservation. And down through the years it has been amply proven that this mill-run of common citizenry can at times be too conservative. Sportsmen oft times have preservation theories which run counter clock-wise to sound game management. I am inclined to believe that the preservationists would be just as guilty of allowing forest damage by deer and other big game species as would the hunters.

All waterfowl and other migratory birds are rightfully covered by international treaty and largely controlled by Federal laws first, state laws secondly. But ducks aren't deer and baldpates aren't bobwhites. The state ownership of resident game—regardless of the land on which they are found—must not ever be relinquished.

Photo By Wallace Hughes

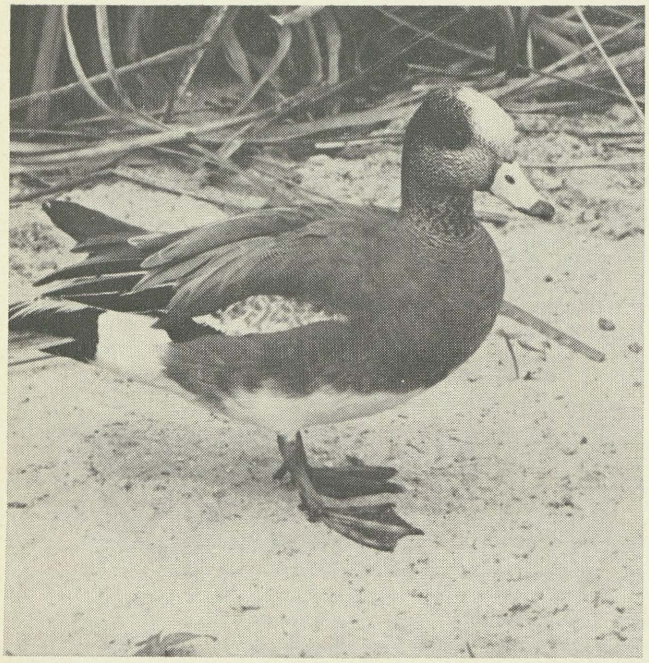


Photo By Lovett Williams

As each new state was carved in the American wilderness, the implied covenant of state ownership of game went with the title. Homesteaders accepted this basic law with more insight than some modern day Americans. Federal or private ownership of resident game would throw present state conservation programs into chaos. All hunting would fade and probably die on out gradually—for the average American.

But the end result of Federal authority over wildlife on public lands follows with the next step of ownership of game by private individuals—farmers, timber owners, etc.—on their own holdings. These land owners could then have game or no game and set seasons according to their own whims. As it stands now they have the absolute right to control trespass—which they should have—and in most states there are laws to provide for damage claims, but the sovereign state still holds title to the game.

If the present crop of idealists want they can easily wreck the budget of every state conservation agency in the nation. They have advanced no alternatives for resource financing by the states, nor sensible enforcement. Damage under this scheme would be taken care of as landowners saw fit and too often to the detriment of wildlife.

Eternal vigilance is the price the states must pay for their right to manage resources. But to say that the Federal government, by wishful thinking, is omnipotent and that its own history of resource management is above reproach is simply the pot calling the kettle black. ●

Fish Management Notes

"IF YOU CAN'T beat 'em, eat 'em!" That seems to sum up the biological, legal and lay feelings toward the tilapia or Nile bream, the once-promising exotic fish that fell from grace but has bounced back into one tiny corner of the Florida fishing picture.

It all began when the Game and Fish Commission introduced the tilapia into reclaimed phosphate pits at Pleasant Grove in east Hillsborough County in 1961. It was an ideal, isolated study area. The purpose was to test the fish thoroughly as a possible new game fish.

From this controlled situation tilapia have spread, most certainly with the assistance of overeager "helpers" *not* on the state payroll, to "numerous private ponds, four creeks, two rivers, and several public lakes," according to fishery biologist Jon Buntz, Lakeland, who has documented the fish's dispersal and current status in south central Florida.

Tilapia aurea (formerly *T. nilotica* but now re-identified), though well established, was eventually written off as an undesirable species—as just another headache for biologists. Chief reason? They wouldn't bite. Being herbaceous feeders, eating mostly algae, they were unavailable to sport fishermen. While the fish continued to thrive, especially in polluted, overenriched lakes, the hook and line catch remained at practically zero.

Their numbers began to present a problem. Attempts at control with standard chemicals failed because tilapia proved extremely resistant to the fish toxicants.

Then the Game and Fresh Water Fish Commission, in 1968, liberalized the fishing regulations in the South Florida Region, permitting the taking of tilapia by cast net and snatch hook. This marked the beginning of a revival of interest in the fish, at least in 2,000-acre Lake Parker Fish Management Area at Lakeland. There, great concentrations of tilapia were known to gather at the city electro-power plant, apparently attracted by the warmer water temperatures around the generating plant during the cooler months. The rule change made the fish catchable and created a new breed of fishermen practically overnight: *tilapia fishermen.* (The fish is, after all, quite flavorful, say fishermen, although the flesh is a bit soft. Smoked tilapia is a favorite.)

Buntz points out the need to utilize the species because it is obviously "here to stay." He plans further studies to determine what benefits can be received from tilapia, pointing out that they "are doing unusually well in muck-bottomed, eutrophic (enriched) lakes where native sunfishes, including the largemouth bass, are having difficulty surviving."

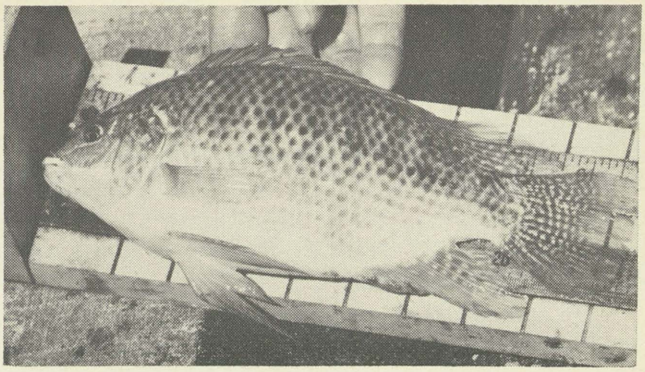


Photo By Wallace Hughes

Here is the tilapia—fatest spreading exotic fish in south Florida. It was an isolated experimental species in 1961. But today it is reproducing in over a dozen bodies of water.

He says the tilapia is "the fastest spreading exotic in the state," now being found in the Alafia and Peace rivers, in Banana, Bear, Peace and Saddle creeks, in lakes Effie, Hancock, Hollingsworth, Mirror, Morton, Parker, and in Banana Lake. Heavy spring rains might well permit the invasion of additional waters in the area since many are interconnected by boat canals.

The extremely low catchability of the species in all but Lake Parker continues to make the tilapia a poor competitor for the sport fisherman's attention. Even so, don't count him out—yet. Buntz says, with tongue-only-half-in-cheek, "Since we are having little success controlling pollution, perhaps this will be the fish to manage in a few years. Hopefully not, but it is a good possibility."

THE FIRST RECORDED occurrence of northern milfoil in the state has been taken from Deer Point Lake in Bay County. The specimen, found growing in three to four feet of water, along with broadleaf watermilfoil, was identified by Bob Blackburn, U.S. Department of Agriculture Research Botanist, Fort Lauderdale.

The new noxious aquatic plant, which spells trouble for fishermen and boaters, was collected during routine weed sampling by fishery biologist Joe Blanchard, DeFuniak Springs, on October 17, 1968. It was found growing in small, isolated patches, apparently having gained a foothold in the 5,000-acre water reservoir just last year.

Another species, Eurasian watermilfoil, is spreading in lower Florida, particularly along the west coast.

WATER QUALITY Project biologist Fred J. Waldinger, Eustis, reported what was termed a "total" fish kill in the South Fork of the St. Lucie River in December 1968. He said the kill "was apparently caused by the use—or, rather, the abuse—of pesticides."

A complete investigation was conducted involving the Game and Fresh Water Fish Commission and three other state agencies. ●

Game Management Notes

RECENT SUCCESS with alpha-chloralose, an odorless, nearly tasteless oral anesthetic in capturing wild birds and animals encouraged Commission wildlife biologist Steven K. Stafford of Lake City to test the drug on bears.

"We thought that an effective oral drug capture method would be especially useful in handling wild bears by eliminating the need for bulky, time-consuming trapping devices, by reducing injury to trapped Florida black bears, and in facilitating the safe handling of the animals after capture," says Stafford.

The powdered alpha-chloralose was administered on baits to 17 wild black bears in the study, which was conducted mostly in the Osceola National Forest, Columbia and Baker counties, Florida, on the southern edge of the Okefenokee Swamp. Baits were set at night.

Nine of the 17 were sufficiently narcotized to permit handling without mechanical restraint up to 48 hours after location—which was usually from only a few yards to within 100 yards of the bait. The other bears escaped in sub-effective narcosis.

Most of the work was accomplished in the spring and early summer when bear depredation on beehives and cattle were most frequent.

In all tests a bait which mixed readily with the drug was used—you guessed it—honey most often, even on cattle kills. "Apiary" bears were usually baited with honey, bee larvae and wax comb mixed with the carefully measured drug and placed in a 2-gallon foot tub. Those bears that disturbed this bait without feeding were baited again with sweet feed and honey or ground beef laced with bacon drippings. If this failed, baiting was discontinued. Those wise old bruins, it was concluded, were the ones which had best access to beehives.

Window screening was kept over the bait to prevent bees from stealing the drugged honey and contaminating the honey in their hives.

Bears that consumed the baits were tracked with a slow trail hound. A dart gun loaded with another drug was carried in the field to finish off bears still awake enough when found to be un-cooperative.

Anesthetized bears were placed in a ventilated steel trailer, kept in the shade, and rolled over every two or three hours to aid circulation. Their reflexes were occasionally checked by probing, shouting, and tickling the eyelids. Recovery time ranged from 18 to 48 hours—but before a bear was released its sex and approximate age were determined, routine body measurements were recorded, and it was given an ear tag.

Stafford's method of capturing and moving nuisance bears, with refinement of dosage measurements, appears to be far better than older trapping methods utilizing wheel-mounted culvert traps and steel-jawed traps—better for bears and biologists.

Photo By Jim Reed

The degree of anesthesia in wild-captured bears in the study was similar in all cases. Of the nine captured, there were six lying prone—sleeping and breathing deeply when located. The only reflex was an occasional eye twitch. Two other bears had divided one dosage and were only moderately narcotized. Another was lightly sedated and had to be restrained with the ropes. The Florida black bear averages less in weight but a male may reach close to 600 pounds. The trapping and moving of this size problem animal is easier when it is put to sleep.

SOME KNOWING NATURE noters frown a little when they hear references to Florida bear, Florida panther, Florida deer, etc., because they know the animals referred to are the same species also found in other states. But to hear "Florida Duck" is an entirely different matter.

Florida is unique in that it is the only one of the contiguous states having a resident wild duck species all its own. The Florida Duck is a non-migratory, Florida-nesting, sun-loving, fast-flying, swell-tasting, "big," dabbling duck related closely to the Northern Greenhead Mallard.

Little is known of the Florida Duck outside its native range—central and southern Florida. In fact, little is known of it, period. But Commission waterfowl researchers are working on it.

Among its familiar colloquial names are Florida mallard, summer mallard, summer duck, Florida black duck, and various combinations thereof.

Interested? See page 6. ●

Shotgun Sling

the gun sling that is removed can be rolled completely, and carried in a hunting coat pocket until the time arrives for replacement

By EDMUND McLAURIN

For more than thirty years I have been conducting technical tests to evaluate the rust-inhibiting qualities of various gun greases and oils.

Some of the products that received first testing are still around—which speaks significantly of their efficacious qualities. Others long ago dropped by the wayside.

But even the oldest, proven products—like Rig, Hoppe's No. 9, and Rusteprufe and Sheath, to cite examples—are receiving stiff competition from some of the newer silicone formulas. Undeniably, some of the new products are amazingly good!

In testing, I use brand new, unblemished razor blades—not the stainless variety, but blades made of high carbon steel, like most of our gun barrels. I carefully coat test blades with different preparations, taking care to achieve an unbroken film in each instance. Coated blades are subjected to both continuous open air exposure and brine solution immersion. Every few days, I examine the test blades and record their condition and reflected changes, if any. I also record the calendar period elapse between inspections.

Over the years, I have not found any so-called gun oil that will give the lasting protection that an unbroken film of grease, like Rig or anhydrous (moisture-free) lanolin gives. But some of the new liquid formulas, like XF-10, for example, are narrowing the marginal difference. Anhydrous lanolin, particularly, becomes a stiff grease in cold weather. To make it easier to apply, I habitually mix it with Sheath (one part Sheath to three parts anhydrous lanolin, by volume) or 25% white vaseline, tested and found free of moisture, or, when I can get it, pure, moisture-free sperm oil in the same proportion.

Much like the lanolin mixture in results, but easier to apply evenly, is Gard Anti-Rust spray solution, which goes on as an aerosol liquid and dries to a semi-hard grease.

Some Gard-sprayed guns have been hanging on my office walls for more than ten years without even the faintest particle of rust on their blued metal surfaces. About twice a year I wipe off the guns to free them of deposits of air-borne dust. I then give them a fresh spraying of Gard Anti-Rust solution and hang them back in place without concern about their future.

For bringing out the highlights of a good gun blue finish, I swear by Rusteprufe. It also gives good protection for guns that are inspected fairly often.

For cleaning gun bores, Rice's XF-10 solution and J-B barrel bore paste have given better results —at least for me—than Hoppe's No. 9 and strong ammonia-mixed solutions. They will work wonders in restoring a badly fouled rifle or shotgun bore, when used with a good cleaning rod and the right kind of bore brushes and patches.

Preparations that have shown up well in tests, besides those already named, include Gun Guard, G-66 Gun Treatment, Silicote Gun Dry and Silicote RV-2, Riel & Fuller Anti-Rust Oil, Anderol, WD-40, Outers Laboratories Gun Oil and Williams (Gun Sight Company) Gun Oil.

In conducting tests, I have found that some oils are not compatible with others. Therefore, when changing brands of gun oil, suggest that gun mechanism and exterior surfaces first be thoroughly cleaned with mineral spirits and allowed to dry before applying a different product.

I can also recommend that guns in use be wiped free of all hand and fingerprints at the end of the day, and especially so before being stored.

I usually wipe surfaces with either Kleenex or a Silicote cloth before applying any solution, and I *always* wipe off my gun at the end of the day, whether or not I apply a fresh coating of chemical protection, to remove the acid deposits of normal handling.

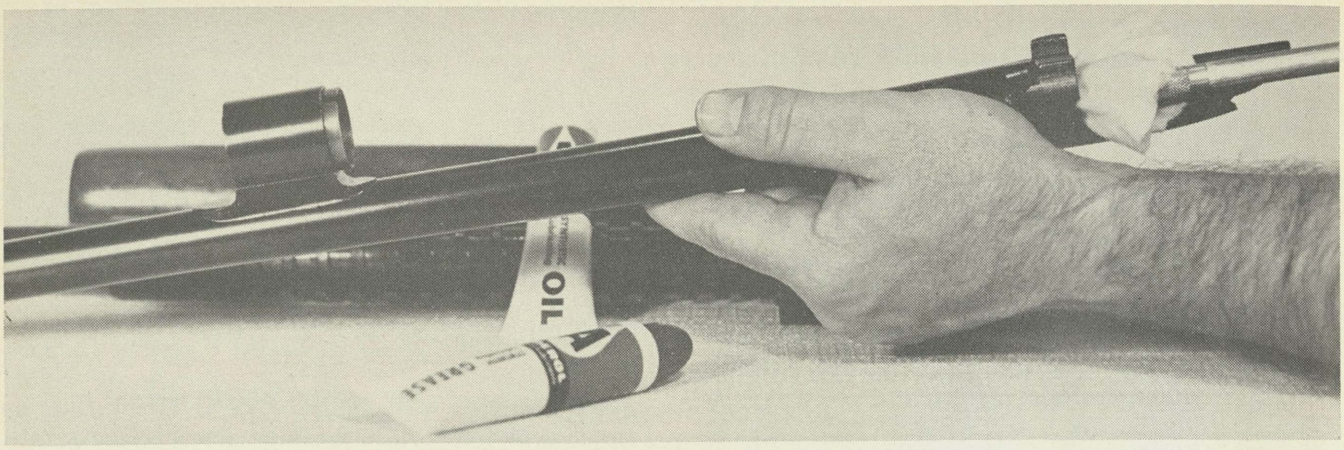
When a shooter wishes to examine the interior of rifle barrel or shotgun bore, it is usually done by holding muzzle end or open breech against a light source.

Some shooters attempt to reflect sufficient viewing light into rifle or shotgun bore by inserting a coin or simply thumbnail in opened breech, so as to catch and reflect light.

These are relatively inefficient approaches. To truly know the condition of a gun bore from breech to muzzle, it is absolutely necessary that interior surfaces receive adequate lighting, so that the viewer's examining eye can detect the slightest blemish at whatever point in the bore it may exist.

The bore under examination must also be wiped free of all traces of grease or oil that might tend to conceal scratches and other barrel defects, if an accurate evaluation is to be had.

(*Continued on next page*)



Whatever your choice of gun cleaning solvent or rust-preventing oil or grease, always use a high quality cleaning rod of suitable diameter-length.

(*Continued from preceding page*)

There are several types of bore examining aids. For its users of .30 and .50 caliber weapons, the Army provides a prism-like gadget that can be inserted in receiver of rifle or machine gun to determine bore condition. The device can also be used for bore sighting an unfired rifle.

Made in both .30 and .50 caliber sizes, the devices are now abundant as World War II Army surplus. P&S Sales Company, P. O. Box 155, Tulsa, Oklahoma 74102, catalogs both types. The .30 caliber size costs a dollar; the less sought .50 caliber sizes are three for a dollar. (Join two of the .50 caliber bore inspection scopes with a cardboard tube and you have a handy periscope, should you have need for a small periscope.)

Very practical, but more expensive, is the Universal BoreSkope, featuring a highly polished piece of prism glass contained in a black plastic housing. A thumb button on top of the short length, box-like case permits the user to extend or retract the glass viewer. When retracted, the glass is protected from accidental damage.

When inserted in the breech of a firearm, bore or rifling is well illuminated by prismatic reflection. The smallest particle of dirt or barrel bore scratch is made visible to the examining eye.

The BoreSkope sells for $4.95. Williams Gun Sight Company, Davison, Michigan 48423, stocks it. So does Stoeger Arms Corp., 55 Ruta Court, South Hackensack, New Jersey 07606.

Also practical, but equally liable to exposed stem breakage if accidentally dropped on a hard surface, is a barrel examining device known as the Bore-Light. It consists of a pen-size flashlight battery case with rear push button switch. A curved tube of light-absorbing and light transmitting Lucite is fitted to front end, through a rubber slip-on-cap.

To use a Bore-Light, you press the button switch to turn on the battery power, then insert the illuminated Lucite tube in one end of gun bore while making examination from the other end. A Bore-Light really puts light into a gun bore!

Sarco, Inc., 192 Central Avenue, Stirling, New Jersey 07980, sells the Bore-Light for a dollar, without the needed single cell, pen-size battery, obtainable at any hardware or drug store.

A bore examining device that I especially like is the one marketed by Forster-Appelt Company, manufacturing gunsmiths of Lanark, Illinois 61046. It consists of a long, small diameter, flexible, light-carrying tube that can be inserted in gun bore, or in any hard to illuminate recess. The price is $2.75. I have all the types described, but use the Forster-Appelt unit more than any of the others.

A bore examining light, whatever the type of personal choice, is a worthwhile investment to anyone who loves and frequently or infrequently handles guns.

MANY SHOTGUNNERS will smirk derisively when mention is made of putting a gunsling on a shotgun; they not only consider such an installation misapplication but downright foolish.

Actually, the idea has considerable merit, especially where a shotgun is carried a considerable distance without possible opportunity for active use—as can happen when a shotgun is among items of equipment portaged into a remote camp.

A gunsling on a shotgun is also practical for the upland gunner; its presence enables a tired hunter to shoulder his gun and more easily and conveniently transport it on the long walk back to car or farmhouse. Just ask the hunter whose shotgun now sports a gunsling!

If your shotgun now lacks sling swivels, make it a point to get a set installed before next hunting season. You will be glad, come next November.

The swivels can be installed now and the sling itself left off the gun until needed. Bases of detachable shotgun sling swivels or swivel studs of correct type are invariably small and scarcely noticeable, yet, once installed, they are always there when temporary addition of a carrying sling is advantageous.

Williams Gun Sight Company, Davison, Michigan 48423, has just announced a swivel adapter that can be put on any single barrel pump or autoloading shotgun, just ahead of magazine slide or fore-end cap, without drilling and tapping for holding screws. The swivel adapter is clamp type; an Allen-screw holds it snug against the shotgun barrel. Once firmly tightened, the adapter will remain in place without possibility of loosening and being inadvertently lost.

The adapter has a small metal ball at bottom, which supports the sling-bow housing incorporating a sling-bow release plunger.

Press the spring plunger and sling swivel-bow and sling can be instantly removed from the shotgun barrel, or as easily replaced, without disturbing the adapter.

A conventional sling swivel can be used on the underside of the butt stock, or both forward and rear swivels can be detachable style. Whatever personal choice, the assembled components should permit quick removal of the entire sling (for upland gunning) and as easily replaced.

The removed sling can be completely rolled and carried in hunting coat pocket until time for replacement.

Five models are available for either the Williams standard swivels or quick detachable style. Sets are available for 20 gauge single barrels with diameters from .700 through .750. There is a 16 gauge set, plus three 12 gauge sets that will even take care of large 12 gauge barrels with diameters above .875. Because of the wide range of barrel diameters these adapters fit, they will also take care of most rifle barrels.

For the smaller barrels and rifles with tubular magazines, the previously reported on Williams tubular magazine adapters (see October 1968 issue of FW) should be used. They accommodate barrel and tube diameters from .405 up.

Williams Gun Sight Company can also furnish special swivel sets made especially to fit the Remington Models 870, 11 and 11–48 shotguns and Winchester shotgun models 12 and 1200, as well as other makes that utilize magazine caps. You can make the installation, or they can do it for you at nominal cost, as can any competent gunsmith.

It is the hunter who has known the convenience of a removable gunsling on a shotgun that really appreciates one. As the news gets around, we can expect to see more shotguns equipped with detachable gunsling. ●

Gun Control Laws

By **JOHN MARSMAN**
Savage Arms Company

HOW MANY of you would shell out $10 million a year for a worthless product? How about $3 million? It's doubtful that anyone in his right mind would even consider throwing away that much money.

Don't snicker too loudly because they're doing it in Philadelphia and if you don't keep a watchful eye on your legislators you may soon be doing the same.

That's what Philadelphia taxpayers are paying for a worthless crime prevention law, but officials there don't like to talk about it. They are having a rough time proving their gun control law works. Crime rate statistics prove it doesn't—at least, not yet. It's an embarrassing situation.

How about the cost of the magic law that doesn't work? The permit required for a gun purchase costs $1. The investigation and paper work required in processing a single permit is estimated to cost the city $15. The taxpayer picks up the difference.

On a yearly basis, according to the city's leading newspaper, Philadelphia taxpayers are shelling out or have lost between $3 million and $10 million; enough, certainly, to pay for an effective crime prevention program. These estimates were based on the 90% drop in tax receipts from firearms sales, the taxpayer borne cost for police investigations and taxes lost through nonsale of related hunting accessories.

What kind of crime prevention could 10 million dollars buy if used effectively? At a rather nice salary of $10,000 it could pay for 1000 additional policemen. This would provide added protection for all the citizens, protection against crimes they have real cause to fear, like robbery, beating, rape.

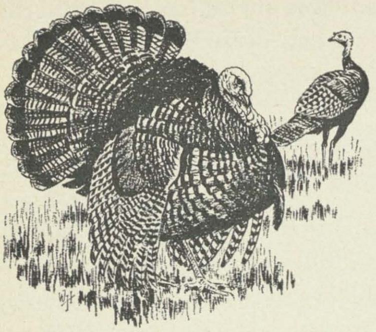
For any city contemplating a gun law like Philadelphia, perhaps consideration should be given to really effective ways of reducing crime; and not using gun laws as a false panacea, and gun owners as scapegoats.

By providing more policemen, residents could return to the parks and playgrounds, they could have the peace of mind of knowing there was little chance their house or apartment would be robbed; that they could take a walk on a warm summer night and know they could return home without being mugged or robbed; that their wife could shop or their daughter return from a school dance without being attacked.

Gun laws won't stop these crimes; effective crime prevention can.

Up until now, little has been said about the cost of gun control laws. The Philadelphia case proves the law is worthless and the cost high. This means the taxpayer is bound to sit up and take notice.

Even in the face of the Philadelphia fiasco, civic leaders in that city are urging the adoption of their worthless and costly law as a model for state and federal legislation. Don't allow it to happen in Washington. ●



CONSERVATION SCENE

Florida Litterbugs

LITTERBUGS are costing Florida State Parks around $129,000 a year.

State Parks Director Bill Miller said loose litter, which does not include disposal of garbage or trash placed in park containers, is one of the most frustrating problems faced by Florida's 65 parks and historical memorials.

Parks personnel spent 64,220 man hours last year picking up litter, Miller said. Beach parks seem to suffer most heavily, accounting for more than half of the hours spent cleaning up. Parks near large population centers also are hard hit.

Paper, bottles, and cans seem to be the main culprits, the parks director noted. He pointed out that bottles and cans are especially dangerous on beaches, where barefoot visitors can so easily cut their feet because of someone's carelessness.

No alcoholic beverages are permitted in Florida State Parks, so beer cans are not the blame in this case, Miller said. However, the "throw-away" type of metal soft-drink cans and glass bottles are a main problem.

"We have found that the "pop-top" openers of cans, with their circular finger holds, are especially painful to barefoot visitors. It is hard for our rangers to spot all of these little things, and we have received many complaints concerning them."

Miller continued, "Our affluent society has made throw-away containers for everything from soup to nuts and it seems they are thrown away whenever and wherever they are empty—no matter where that happens to be."

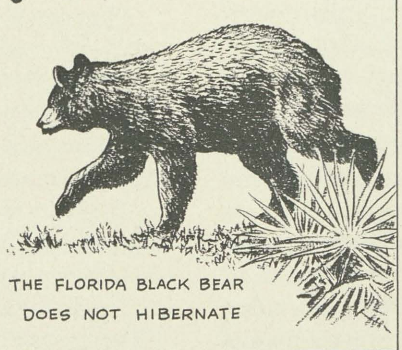
Warning that litter can ruin natural scenes with its intrusion of ugliness, Miller said, "We provide plenty of trash cans; persistently urge our visitors by signs, speeches, and every other means at our command to observe good manners while in our parks; try to set good examples by keeping the parks neat; and participate in educational campaigns. Nothing seems effective enough."

Gun Control Act

THE NATION'S hunters and firearm buffs are now on the lee side of the Gun Control Act of 1968 which became effective December 16, 1968, after long and sometimes bitter wrangling both in and out of Congress, reports the National Wildlife Federation.

Initially, the Act was one of the most universally misunderstood and misinterpreted pieces of legislation to come out of the Congress in recent memory. It has generated national confusion, ranging from a lack of cogent interpretation on the eve of the Act's implementation, to complete misinterpretation of certain controversial provisions. For example, the Act does prohibit the sale of firearms and ammunition to anyone under 18. But, a major west coast newspaper interpreted this to mean no one under 18 could go hunting!

UNLIKE HIS NORTHERN COUSINS —



THE FLORIDA BLACK BEAR DOES NOT HIBERNATE

Perhaps the confusion could be attributed in part to over-reaction in the wake of a hard fought and often emotion-charged battle between the Act's opposing forces. But the major villains were complexity and speed of enactment.

With the law set to go into full effect less than a month after receiving the President's signature, the resulting juggernaut of public inquiries caught Alcohol and Tobacco Tax regional offices with their interpretations down. Much of the initial furor has subsided, but considerable public misunderstanding still exists over certain general provisions of the Act. The Washington, D.C. office of the Alcohol and Tobacco Division offered the following clarification of five primary sources of confusion:

1. The Act *does not* require registration of conventional firearms.

2. The Act *does not* prohibit over-the-counter sales of ammunition to non-residents.

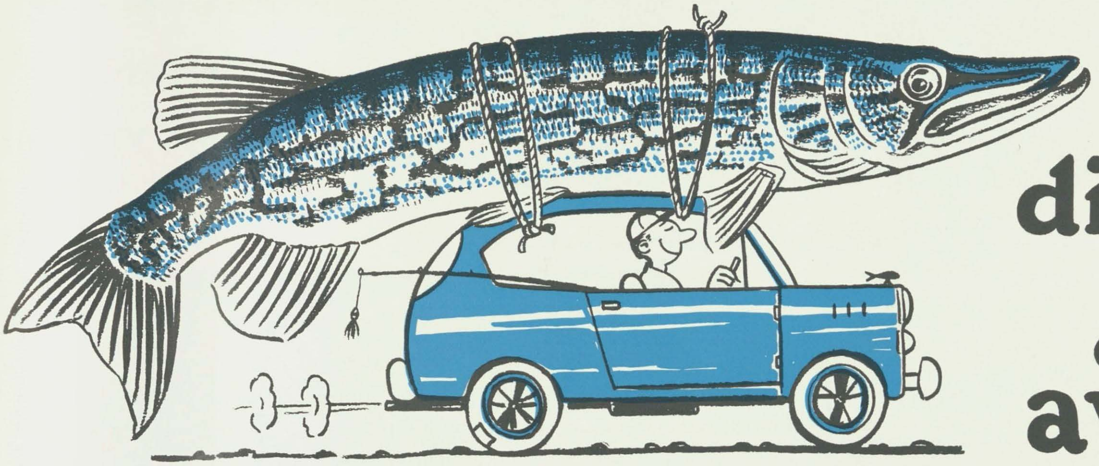
3. The Act *does not* prohibit transport of firearms and ammunition to another state for hunting, showing or competition.

4. The Act *does* prohibit sale of any firearm or ammunition to anyone under 18 years of age, and sale of handguns and handgun ammunition to anyone under 21 years of age.

5. The Act *does* prohibit mail-order sales of firearms and ammunition except to licensed dealers, importers, and authorized government agencies.

Specific questions regarding these or any other provisions contained in the Gun Control Act of 1968 should be addressed to the nearest regional office of Alcohol and Tobacco Tax Division, Internal Revenue Service, U.S. Treasury Department.

For that BIG ONE that didn't get away



ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS	8 pounds or larger
CHAIN PICKEREL	4 pounds or larger
BLUEGILL (BREAM)	1½ pounds or larger
SHELLCRACKER	2 pounds or larger
BLACK CRAPPIE	2 pounds or larger
RED BREAST	1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date__________
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print)__________

Address __________

City__________ State__________ Zip No.__________

Species__________ Weight__________ Length__________

Type of Tackle__________

Bait or Lure Used__________

Where Caught__________ in__________ County

Date Caught__________ Catch Witnessed By__________

Registered, Weighed By__________ At__________

Signature of Applicant__________

CUT OUT AND SAVE THIS APPLICATION BLANK

American Egret

Photo By Lovett Williams

FLORIDA WILDLIFE Magazine
Game & Fresh Water Fish Commission
Tallahassee, Florida 32304

please print or type

Name ____________________

Street No. ____________________

City ____________________

State ____________________ Zip Code ____________

SUBSCRIBE NOW

The Florida Magazine For ALL Sportsmen

Florida WILDLIFE

12 Issues **$2.50**
24 Issues **$4.75**
36 Issues **$6.25**